DOCUMENT RESUME

ED 061 696		EC 041 904

TITLE	Selected Convention Papers: Perspectives in Theory and Practice.
INSTITUTION	Council for Exceptional Children, Arlington, Va.
SPONS AGENCY	Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE	63
NOTE	240p.; Papers presented at the Annual CEC Convention (41st, Philadelphia, Pennsylvania, April 16-20, 1963)
EDRS PRICE	MF-$0.65 HC-$9.87
DESCRIPTORS	*Conference Reports; *Educational Needs; *Exceptional Child Education; *Handicapped Children

ABSTRACT

Presented are 59 short, selected convention papers (conference reports) on different aspects of educational needs for handicapped children. Representative topics include the Warren Project on effectiveness and feasibility of early admission to school for mentally advanced children, sheltered workshops for the trainable mentally handicapped, the school's responsibilities and resources for the neurologically impaired, reading instruction in the psychiatric schoolroom, current developments in research on the comprehension of rapid speech, the use of eye reports for statistical purposes, a vocational readiness project for young handicapped students in New York City, the influence of sociopathy on children's reactions to reading instruction, aspects of enrichment in more effective teaching practices for exceptionally talented children, Peabody College research on the Illinois Test of Psycholinguistic Abilities, higher standards and better professional training for teachers of homebound and hospitalized children, retention in educable retarded and normal subjects as a function of amount of original training, preparation of teachers for exceptional children, and curriculum goals for the homebound and hospitalized. (CB)

ED 061696

Perspectives In Theory and Practice

Selected Convention Papers

FC [redacted] 041904E

[redacted]

SELECTED CONVENTION PAPERS

41st Annual CEC Convention

Philadelphia, Pennsylvania April 16 - 20, 1963

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

The Council for Exceptional Children, NEA
1201 Sixteenth Street Northwest, Washington 36, D. C.

1A

TABLE OF CONTENTS

Appeldoorn, Helen. Realistic Approaches to Supervision and Administration of Special Education 1

Arnold, Marcus S. The New Science Curriculum and the High School Student on Home Instruction 4

Barney, William David. The Warren Project on Effectiveness and Feasibility of Early Admission to School for Mentally Advanced Children 8

Barsch, Ray H. A Concept for Tomorrow: The Parent Counselor 13

Blatt, Burton. Hail the Conquering Dolphin -- and other Reflections on the Pre-Service Preparation of Teachers 19

Bloom, Jean L. A Private Agency Approach to Programming for the Rehabilitation Needs of Exceptional Children in High School 25

Blue, C. Milton. The Trainable Mentally Retarded: Sheltered Workshops 28

Boone, George C. The School's Responsibilities and Resources for the Neurologically Impaired 32

Burris, Waitus R. Identification of the Gifted: Mandates 36

Casebier, Gabrielle. The Dyslexic Pattern of One Case Diagnosed as Having Neurophysiological Dysfunction 37

Church, Joseph. Logical and Linguistic Operations 41

Davy, Ruth Ann. Closing the Meaning Loop through Progressive Choice Structure .. 45

Deno, Evelyn D. Implications for Curriculum from Child Development Research ... 48

DiMichael, Salvatore G. When Today's Handicapped Children Become Adults 54

Douglas, Katherine B. Reading Instruction in the Psychiatric Schoolroom 56

Dybwad, Rosemary F. The Widening Role of Parent Organizations around the World 59

Eagles, Eldon L. Pittsburgh Study of Hearing in Children -- Implications for Case-Finding 63

Fischer, John H. General Session I: Some Special Aspects of Universal Education 73

Foulke, Emerson. Current Developments in Research on the Comprehension of Rapid Speech 79

Gable, Martha. New Frontiers in Educational Television 84

Gardner, Ray. The Effectiveness of Cooperative Area Administration for Special Education in Suburban Areas 87

Gold, Marvin. Divergent Production Performance as Affected by Type of Task and Length of Test 90

Hatfield, Elizabeth M. The Use of Eye Reports for Statistical Purposes 94

Henderson, Robert A. Issues in Determining Standards for Professional Personnel in Special Education as Viewed by the Administrator 100

Hiner, Gladys. Programming for Severely Retarded Preschool Children 101

Jarrell, A. P. A Project to Assist Public Schools to Meet Some of the Major Rehabilitation Needs of the Mentally Retarded 105

Johnson, Vernon L. Curricular Provisions for the Gifted: Mandates 109

Jones, Mamie Jo. President's Address: The Council in Action...................111

Jones, Reginald L., Gottfried, Nathan W. Two Exploratory Studies of Preferences for Special Class Teaching 111

Jordan, Thomas E. Educability: A Case of the Wonderland Syndrome.............112

Katz, Paul J. Discussion of the Possibilities of Using a Classroom as a Setting for Imparting a Strategy to Aid Educable Retardates to Transfer Learning and/or Solve Problems 116

Kirk, Samuel A. General Session IV: Rearranging our Prejudices...............121

Klapper, Morris. A Vocational Readiness Project for Young Handicapped Students in New York City 125

Krippner, Stanley. The Influence of Sociopathy on Children's Reactions to Reading Instruction.......................................129

Kvaraceus, William C. Norm Violation, Class Status, and Mobility: Some Implications for Schools...............................135

Kvaraceus, William C., Rabinovitch, Ralph D. Clinic: The Emotionally and Socially Maladjusted Child 143

Lamb, Alfred J. High School Diploma - A "Must" for the Deaf...................155

Lane, James A. More Effective Teaching Practices for Exceptionally Talented Children: Aspects of Enrichment.............................159

Milgram, Norman A. The Relationship of Language to Cognitive Performance with Special Reference to the Mentally Retarded............171

Morris, Morton. The Trainable Mentally Retarded in the Day School: Goals for the Teens and Thereafter 176

Moss, James W. Research Provides the Questions 180

Mueller, Max W. Peabody College Research on the Illinois Test of Psycholinguistic Abilities 183

Perry, James H. Administrative Provisions for the Gifted: Mandates 187

Reisman, Maurice J. Rehabilitating the Physically Handicapped College Student: An Agency Point of View 190

Reynolds, Maynard C. Some Research-Related Thoughts on Education of the Gifted 194

Rooke, M. Leigh. Higher Standards and Better Professional Training for Teachers of Homebound and Hospitalized Children 195

Sandberg, John H. Teachers for the Gifted: Mandates 197

Selznick, Harrie M. Diagnostic, Evaluation, and Rehabilitation Centers for Handicapped Children 200

Simches, Raphael M. Research of the Physically Handicapped -- Reactions 207

Smith, Grace M. Program Evaluation for the Gifted: Mandates 212

Smithdas, Robert J. Rehabilitating the Physically Handicapped College Student -- A Deaf-Blind Student's Point of View 215

Vergason, Glenn A. Retention in Educable Retarded and Normal Subjects as a Function of Amount of Original Training 218

Walle, Eugene L. School Hearing Conservation Program: Perspectives in Theory and Practice 219

Ward, Virgil S. Mandates in Programming for the Gifted: Nature of the Symposium 224

Wiener, Jean L., O'Shea, Harriet E. Attitudes of University Faculty, Administrators, Teachers, Supervisors, and University Students Toward the Gifted 225

Wiest, William T. How an Association for Retarded Children Can Help the Public School Program for the Retarded 225

Wiles, Marion E. Preparation of Teachers for Exceptional Children: In-Service Aspects 228

Wolinsky, Gloria F. Curriculum Goals: The Structure of Knowledge and the Education of Children who are Homebound and Hospitalized. . . 231

Younie, William J. The Trainable Mentally Retarded: Goals and Responsibilities for Institutional Programs 232

REALISTIC APPROACHES TO SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION

Helen Appeldoorn

As special education expanded throughout the State of Illinois, it became evident that the smaller school districts could not develop and maintain a full program for exceptional children. In order to obtain a general school population of sufficient size to maintain special education programs, a joint agreement plan was enacted by the legislature whereby two or more school districts may form a contractual organization "to provide the needed special education facilities and to employ a director as well as other professional workers for such a program."

The Northwest Suburban Special Education Organization is such a joint agreement of ten school districts including all the elementary school districts within two high school districts. The high schools are essential so that the programs for exceptional children will extend through the secondary level. Any joint agreement in Illinois has within its organizational plan a directing board to establish the policies, an executive committee with which the director carries on the business of the joint agreement, a financial plan, and the established policies.

The director of special education for a joint agreement is the chief administrative officer for the organization with responsibilities to direct all programs. Thus a director functions at seven levels: that of the directing board, the administrative level of each school district, the principals, the teachers, the pupils, the parents, and the community.

In such a bevy of activity - professional planning for growth, community and school re-education to include the exceptional child, development of ample budgets, organization of transportation - the director or administrator of special education looks for assistance from supervisors to assume leadership for improving the quality of teaching to its limits.

For too long it has been the opinion that a well-qualified director could both administer and supervise a program of special education regardless of its scope and size. Indeed in metropolitan areas, which have always provided leadership in administrative organization for special education, the mere force of numbers has demanded greater effective instructional leadership and education. In the cities with smaller populations this need is only beginning to develop as the concept of the exceptional is broadening and and educational facilities as well as services are demanded.

Then too, the philosophy regarding the special education program will determine whether this is merely a way to get rid of students or whether the purpose is a well-defined educational-vocational goal for every child. If our philosophy includes the approach of every child on an individual basis to study his needs and plan a program accordingly, this requires both personnel and time. All this cannot be the director's job unless he is a superhuman creature. Perhaps all too few persons realize that special education handles the complex problems of the school, problems we often wish might be easily managed or even understood. To develop educational facilities for these problems is equally complex requiring personnel and time; often more time is required as a result of inadequate number of staff personnel.

Perhaps our belief that a director or one administrator could handle a good program was part of our growing up and coming of age. Now we are realizing that supervisors are indispensable to functioning programs, ever-increasing in the types of students served. When the group of directors of special education in Illinois hibernated during a few days in June of 1955 to write "A Guide for Directing the Education for Exceptional Children in a Local School District," the scope of our efforts did not include supervisors. Mention merely was made in a brief paragraph that the director plans with supervisors regarding various responsibilities and problems.

From then to now our horizon has broadened as the Illinois Administrators of Special Education has an active committee working to publish a circular on the duties and responsibilities of various supervisors in the area of special education. Although the number of supervisors throughout the state (excluding Chicago) is few, we feel that such a guide will give direction to school districts as this significant position is being developed.

Recently, when our organization, through committee work, defined for state reimbursement purposes the duties and responsibilities of the director of special education as well as the required training, the same were included for supervisors with differentiations for supervisors of special classes, school social workers, psychologists, and speech correctionists. I would hazard a guess that in 1955 we would have overlooked the latter areas.

What then are some essential guiding principles which might be considered for supervisors within the scope of special education? As I was examining this question, it seemed only natural to turn to general education, from which we have much to learn.

1. Perhaps our very first principle should be to work with and learn from supervisors in general education. Should we not be active in such organizations as A. S. C. D. which for years has been the strong, motivating force in instructional leadership and curriculum development?

2. Surely an examination of our philosophy of special education is mandatory. If our programs are to be more than mere dumping grounds, then we must evaluate our goals. Is our purpose to provide quality education, to assist individual staff members, to increase morale among teachers and professional workers, to extend our programs to include more and more students with differing exceptionalities than we once thought, and to improve our organizational structure for classes and services? Then our belief that one administrator can handle all these activities is indeed a myth. A second myth is prevalent if we consider that a director can be qualified to work in all areas of special education.

3. The school personnel including those in special education must feel the need of supervisors. It is so easy to say that a director wishes supervisors to ease his heavy work load, or to refuse the request for such a position by reminding the director that these are his responsibilities. But far more important are the teachers who voice a great need for an instructional leader working with them. Together they wish to attack educational problems as a joint enterprise to improve the learning experiences of children and youth. Naturally much depends upon the point of view of the staff and its dedication to improve the existing program.

4. Surely a clear-cut definition of the role of the supervisor must be delineated so that all school personnel understands his duties and responsibilities. It is not difficult to accept the job of the school principal as there are concrete, specific functions to be performed. But the connotation for the supervisor tends to be negative with his functions appearing to be that of "checking up" or "correcting weaknesses." Thus a detailed job description to clarify the role of the supervisor would disseminate confusion as well as support the need for this work.

Although we have indirectly mentioned many functions of the supervisor it may be well to enumerate them again, for they include:

developing the quality of education through in-service
maintaining high staff morale
helping to understand individual needs of children

improving programs and record-keeping
evaluating programs and research
recruiting personnel
orienting new staff members
developing parent education programs
helping to direct and improve public relations including interpretation of programs and needs of exceptional children
providing a wealth of professional leadership

The role of the supervisor must be understood so that he is not threatening to other administrators or to teachers. His relationship to other staff members should be described as his relationship to the superintendent, to the director of special education, to directors or supervisors of other areas, to state consultants, or to the various administrative positions within a joint agreement.

Naturally these duties and responsibilities should be carefully written. The more school districts involved, the more detailed should this be. However listing these duties and responsibilities does not automatically mean (we have found) that these are understood. It is truly astonishing how often these "masterpieces" are not read. So every avenue of approach should be used to develop this understanding: staff meetings, individual conferences, on-the-job activities, workshops, casual conversations, etc.

Sometimes a gradual assumption of responsibilities is advantageous so that the staff may grasp the significance of this work. Or even better an internship could give a learning opportunity not only for the supervisor but also for the school staff and community.

5. Selection of a supervisor is no small task, for the qualities, abilities, and areas of competence for this unique position are not easily acquired. Unless the supervisor has a warmth of personality that wins teachers, he will find it difficult to establish the rapport that breaks down status barriers and enables the teacher and supervisor to attack instructional problems. The good supervisor possesses a talent to communicate professionally with individual teachers and groups of teachers. Also the supervisor who leads teachers in the task of improving their own skills must have the know-how that includes principles of curriculum development and learning theories, familiarity with supervisory techniques, knowledge of growth and development including individual differences, and a mastery of what constitutes good teaching.

6. Promotion from the ranks is a good practice as this offers incentive to the staff within a school district to assume administrative responsibilities. Then too the individual knows the school system so that extensive orientation is not required. Yet this selection must be carefully interpreted to the staff lest hard feelings mar the effectiveness of the supervisor's work. The selected person must be respected by the staff, for generally he has been chosen from the ranks of classroom teachers to serve the needs of other teachers for ideas, resources, stimulation, and emotional support, although this latter is not written into the contract.

7. The name of the position may cause some perplexity unless there is consistency in our terminology. For psychologists we use the term chief or supervising psychologist; for school social workers we may say head; for the mentally retarded we have the title of supervisor; for the blind we may use coordinator; while for the impaired hearing we may employ the term consultant. Perhaps the functions of these titled positions may vary somewhat, but a consistent name for a comparable position within any school district or joint agreement will be most advantageous to understanding and acceptance.

8. Universities after careful study have begun to develop sequence of courses for training supervisors in specific areas of special education. Surely a masters degree is the minimum of graduate training as well as are the requirements for a state supervisory certificate. Indeed the supervisor's training turns from a direct contact with children to adult education, a role he must fulfill with delicacy and tact. As an educator of adults, the supervisor realizes that the general principles of learning which have guided his work with children will not be too different from those he will use in creating an environment for adult learning: work that is self-activated, responsibility with freedom for variation and experiment, and recognition of the fact that the individual is of paramount importance.

9. The mere mechanics for this position should be handled before the supervisor is employed. Favorable working conditions, particularly office space, adequate secretarial help, sufficient budget including travel allowance, length of his work year, materials, attendance at conferences, etc. should be defined and provided so that the supervisor may spend his time effectively.

10. No program is complete without evaluation. Evaluation of the effectiveness of the supervisor's work is only part of the complete evaluation of the whole program. Time should be taken to evaluate the administrative structure, the school climate of his work, and the role of the supervisor as well as the effectiveness of that role. Upon such evaluation depends not only the basis for change but also the extension of the program.

Along with evaluation we should be open-minded and alert to try out new ideas. For example, in programs for which a small number of teachers are needed as in the area of the deaf, it would be almost impossible for a school district or a joint agreement to provide a supervisor. Thus a special study project might be planned whereby a number of joint agreements would employ a supervisor to help the teachers in one area of special education. Indeed we must be continually changing our approach to supervision as we learn more.

Indeed exciting frontiers are opening for consideration in both the planning for what to teach and the planning for the human beings we teach.

Helen Appeldoorn, Director of Special
Education, Northwest Suburban Special
Education Organization, Wheeling, Illinois

THE NEW SCIENCE CURRICULUM AND THE HIGH SCHOOL STUDENT ON HOME INSTRUCTION

Marcus S. Arnold

The great postwar interest in scientific development in this country and throughout the world was given a literal lift and expansion when the first sputnik circled the earth. The concern for the place of the United States in its competition with Russia in the scientific field made the nation aware of an apparent shortage of scientists. This, in turn, led to a crash program for the development of scientists through an increased emphasis on this area in the program of education.

Actually, tremendous strides in education in science had begun long before 1958. There had long been an awareness of the importance of increasing the study of science by starting at the very lowest levels of schooling and by increasing its depth at the secondary levels. This has met with considerable success because no other area of the curriculum lends itself more naturally to satisfying the needs and interests of the young child and the early adolescent than does science. In addition to an increase in content in the program, there was a revision in the method of approach. The "science discovery" method in which the child is urged to find out for himself presents an ideal teaching-learning environment which can be adapted to pupils of a wide range of ability.

In New York State a new science syllabus was put into effect in 1958. In place of the old compartmented units, the new syllabus consists of nine units which deal with problems that children encounter in their own lives. The planning of material presented in this syllabus was begun as early as 1948. At that time the prospect of a serious shortage of scientists, engineers, and teachers of science was beginning to be recognized.

The objective of this new program was to develop materials and procedures that would help any teacher improve and modernize science instruction in the early secondary grades. Another prime objective of the designers of this course was to make it as adaptable as possible to a wide variety of learning and teaching situations. In order to give the necessary guidance to teachers without sacrificing flexibility, a series of three handbooks of unit-related science activities, supplemented by various teaching aids, was devised. Although, undoubtedly, the experienced science teacher will have his own ideas and devices for presenting the various aspects, he may still be expected to recognize the value of the explicit suggestions provided in this curriculum program. Details of methods and procedures have been given greater stress in this outline than in previous syllabuses. The program goes into a depth of detail which may not be required by the experienced teacher of science but which should give confidence to the teacher who is anxious for and needs assistance. It offers no new basic objectives not already well tried. The publication of this syllabus completed a curriculum project that not only anticipated but fully implemented the major objectives of science education. We know that how a pupil learns can be as important to him as what he learns. Attitudes toward what he is doing, skills in working with materials, understandings of himself and those about him - - these are outcomes that may continue long after the subject matter itself is forgotten.

A teacher's responsibility consists not only in outlining the subject matter to be covered but also in working out the many teaching situations he intends to use. This latter phase of the task may demand a greater part of his efforts, and his skill in developing the teaching situation will determine in large part the success of his program.

Learning implies action. Information cannot be poured into boys and girls as cream is poured into bottles. Children must do things if they are to learn. Our new science program is built around a great variety of pupil activities - asking questions, finding answers, performing experiments, reading resource materials, preparing projects, and perhaps assisting the teacher with laboratory chores whenever feasible.

There are two ways for pupils to gain information - - through first hand experiences and through other people's experiences. First hand experiences are generally vivid and well remembered, but opportunities for these, particularly in the areas of the homebound and hospitalized, are often limited in number and variety. Books and pictures are able to bring together the results of many people's experiences. Our teachers lean rather heavily on descriptive science, assisted by whatever visual material they have been able to accumulate through their years of experience. In general science it is often possible to put major emphasis on first hand experiences. This benefits all pupils, no matter what their background and abilities.

In administering the program of home instruction, we are faced with the problem of applying the various principles that I have just enumerated to the instruction of science for the child who is in a homebound situation for a short period of time as well as for the child who may be spending his entire school career on home instruction. Obviously, modifications and special adaptations must be arranged. Since every student receives instruction in science, it becomes necessary for all teachers to become skilled in the area of subject matter as well as in the actual instruction of science. This presents tremendous problems in teacher training. This problem will be referred to again later on in this presentation.

In New York City homebound instruction on the high school level (grades 9-12) is supplemented by the High School of the Air which consists of classroom lessons broadcast in various curriculum areas with special emphasis on English, social studies and science. The lessons are broadcast over the New York City Board of Education F. M. radio station. They consist of lessons with small groups of students in one of the high schools. The teacher involved in the broadcast is a subject matter specialist. The student at home is provided with an F. M. radio so that he may participate in these lessons. The staff of the High School of the Air prepares study guides in the subjects that are broadcast. In science these guides are prepared in general science and biology. These guides are mailed periodically to all students who require them. An integral part of these guides is a listing of experiments that can be done at home with little or no special equipment. These experiments may be done with the teacher of the homebound or may be done by the students independently and later discussed with the visiting teacher.

In science instruction generally, problems must be carefully selected and must have significance to the individual pupil. This is often a difficult thing to achieve even in the classroom situation. It is much more difficult, therefore, in homebound teaching. Our home instruction teachers must be concerned with setting up situations that arouse interest and give rise to problems. As teachers become acquainted with their individual pupils, they become aware of special interests and abilities. Too frequently there is need to modify a science program somewhat. In the homebound instruction such modification may consist of variations and experiments, special readings, etc. Since our pupils on home instruction do much of their science project work when the teacher is not present, the teacher's role as one who offers encouragement, guidance and suggestions becomes enhanced in home instruction. As in any kind of instruction, good teachers can stimulate interest.

The Shape of Things to Come

Science in grades seven, eight and nine is still in a state of transition. As a result of significant progress in the development of elementary school science programs in many school systems and experimentation with new courses of study at a senior high school level, the science program in grades seven, eight and nine is undergoing rapid change. At issue are several conflicting philosophies, but it is generally agreed that there is need for strengthening the science offered in these grades, with special emphasis on individual laboratory work. There is agreement that pupils are able to handle more content than they have generally been asked to handle in the past. The matter of "more" content, however, is not so much a matter of quantity as it is coverage in depth, including in the program larger blocks of content to permit better teaching. There is disagreement concerning what content belongs in the program, at which grade level, and to what extent a subject should be covered in depth.

In New York City a careful appraisal and comparison of the junior high school general science with the K-6 elementary science program revealed wide areas of duplication, not only of subject content but also of learning experiences and activities. In addition, general science in New York City in grades seven and eight has in the past been relegated to a minor status, being offered only twice a week. The removal of all areas of duplication and an increase in time allotment in the science program in grades seven, eight and nine would result in a scientific vacuum on the junior high school level. What will fill this void? These three years in the contemplated K-12 science program present a great challenge for science educators and scientists everywhere. The answer to this challenge will crystalize a similar challenge for the high school which in turn will precipitate another challenge for the colleges.

Today in New York City significant changes are in progress and more are being contemplated. For example, it has been suggested that the time allotment of two periods a week in the seventh and eighth years be extended to four periods a week. Areas of physics, chemistry, biology, and earth science that could be meaningful and significant to the child in the seventh and eighth years may be included at this level to fill the scientific vacuum mentioned above. The trend in science education toward a "science discovery" approach has placed greater emphasis upon the need for individual laboratory work. As a result, six periods a week (including a double period for individual laboratory work) are being suggested for science students in the ninth year and above. This increase in time allotment, plus the additional emphasis for individual laboratory work, will create additional problems for home instruction teachers.

Biology

The 1958 revision of the biology syllabus also reflected the trend in science education toward a "science discovery" approach. Emphasis shifted from the mere accumulation of factual knowledge toward the understanding of biological principles. In addition, a handbook of activities was prepared to be used in conjunction with the new syllabus. The handbook provides the teacher with a wide range of interesting activities that may be used to aid the pupil in fully comprehending the significance of the biological principles involved. The major purpose of the handbook is to provide activities for all levels of pupil interest and ability.

The minimum time recommended for the study of biology is six 45 minute periods a week or five 55 minute periods. If six periods a week are scheduled, it is desirable to have a double laboratory period to provide time for individual laboratory experiments.

One of the requirements for the successful completion of the biology course on a full-time basis is that the pupil should have spent at least 30 periods in the laboratory performing laboratory work and should have prepared a written record of this work in a notebook. The home instruction student is limited as to what experiments he can do at home with little or no equipment. However, our study guides in biology provide for more than the minimum number of experiments, and our teachers do require a notebook from their students.

The trend today is to upgrade the high school course in biology in terms of modernization of content areas. Such areas as cellular metabolism, enzyme function, the role of vitamins and hormones in cell processes, the development of vitamin analogues as chemotherapeutic agents, and the new approaches to the study of biology through the study of chemistry and physics are being evaluated for possible inclusion in a course of study in high school biology. The above will present a formidable problem in content, time, and laboratory equipment to all teachers, especially the teacher on home instruction and his students. We are in a period of profound change. Apparently there is no limit to what students can learn. A great limiting factor, however, is still the untrained teacher.

Problems for Investigation

1. What type of pre-service training is needed for the future elementary, junior high school, and senior high school teachers?

2. What type of specialized in-service training can be provided for teachers in the home instruction program?

3. How can radio and television be utilized most effectively in the presentation of science material for homebound students?

4. What types of supervisors and supervision are needed to insure the success of the science program at all levels?

5. What facilities covering equipment and supplies are needed for each grade level in science?

6. What is the best method of distributing equipment and supplies?

7. How can more time be found for the science program for the student on home instruction?

8. Should science be taught by all teachers or by science specialists?

Sources

"Science on the Horizon"	-	Report of Proceedings, Science Institute for the Formulation of the Guide Lines for a Sequential K-12 Science Program, August, 1959. Samuel Schenberg, Director of Science, New York City. Director of the Science Institute.
Science 7-8-9	-	Suggestions for Developing Courses of Study in General Science for the Early Secondary Grades. Bureau of Secondary Curriculum Development, New York State Education Department, Albany, 1956.
Science 7-8-9	-	Experimental Syllabus, Part One. Bureau of Secondary Curriculum Development, Albany, 1962.
Biology	-	A Handbook of Activities to Accompany the Course of Study in Biology. Bureau of Secondary Curriculum Development, Albany, 1960.

Marcus S. Arnold, Director, Bureau for the
Education of the Physically Handicapped,
New York City Board of Education

THE WARREN PROJECT ON EFFECTIVENESS AND FEASIBILITY OF EARLY ADMISSION TO SCHOOL FOR MENTALLY ADVANCED CHILDREN

William David Barney

Admission to school appears to be one important area of educational practice where the theory of individual differences has produced little modification to traditional procedures. An arbitrarily determined CA as the criterion for school entry persists in spite of general recognition that marked variations in capacity for learning are discernible even in the pre-school years. The legal minimum age of admission varies, interestingly enough, from one state to another and from one country to another but very rarely from one child to another within a school district.

Exceptions to these CA criteria may be found, according to an NEA (1958) report, in only about one school district in five. Here an equally rigid MA criterion permits intellectually superior younger children to gain entry early, but in almost all of these areas parent interest and initiative is necessary if the child is to benefit from the variation. Parents must be aware that they can apply for consideration, be sufficiently interested to do so and in many places furnish psychological and physical reports on the child along with the application.

This inflexibility in admission practices would not be so serious if schools were prepared to adopt programs geared to the needs of individual children at entry. But too often, at widely varying stages of readiness and over-all readiness for academic learning, they are admitted to formal and inflexible programs. Perhaps we should be aiming at flexible admission to flexible programs, followed by flexible progression.

The Warren project is concerned with one aspect of flexible admission, i.e., the early admission of mentally advanced children. As the project title indicates, it is a "field demonstration of the effectiveness and feasibility" of incorporating early entry into the regular admission practices of a complete school district. It is not basic research into the effect of this form of acceleration on gifted children. This has already been carried out and the evidence, including that from longitudinal studies, has demonstrated beneficial results, social and academic, provided adequate selection procedures have been employed. It is unnecessary to detail these investigations or their results here as the recent CEC special publication edited by Reynolds (1962) does this concisely if somewhat briefly. See also Birch (1962).

Early admission practices in four different kinds of school districts are also described in the CEC publication. Altogether this small publication provides the best publicity that early entry has had. Although Brookline, Massachusetts, introduced early entry 30 years ago and has since carried out follow-up studies, very little publicity has accompanied it (Barney, 1963). What there is provides very little detailed information on such things as administrative procedures, costs, increased work loads for teachers, psychologists, and administrators, in assessing individually a complete preschool year group, identifying the gifted and admitting them early.

Nor has there been systematic assessment and reporting of community and professional opposition to such a modification of well-established traditional practice, nor of devices employed, where necessary, to modify negative attitudes (see Hobson, p. 22 in Reynolds, 1962).

The Warren demonstration, assisted by a grant from the U. S. Office of Education, Co-operative Research Branch, is designed to give maximum visibility to the project both during its experimental life and at the conclusion. A variety of communication channels are being employed to reach professional and lay persons.

In time it should be possible to provide the administrative details mentioned above, demonstrating that a school board *can* iniate and operate flexible admission.

It may be more difficult to establish that early entry *should* be practiced. At the moment there appears to be considerable opposition, some of it purely sentimental in nature. Much is made of the so-called "dangers" of "pushing" children; the materialistic desire to get them into and therefore out of school early, thereby depriving them of some of the years and joys of childhood. This is not a difficult thesis to counter, as early entry does not involve "pushing" the child. Adequate selection procedures, using multiple criteria, will ensure that the "whole" child is *ready* for school experience. As for depriving him of the joys of childhood, there is anecdotal evidence from the Warren parents, as well as from other parts of the country, that young gifted children are frequently happier in the more stimulating environment of the kindergarten or grade one classroom than in their own homes. In some cases it is not that their homes and neighboring communities have nothing more to offer but that expert guidance is required to assist them to utilize these resources further.

More substantial opposition comes from the educational psychologists who maintain that intellectual development is not an important issue at this age. Piaget (1929, 1952, 1958) for example considers that young children are incapable of critical thinking before seven or eight years of age, that they do not attempt to understand cause and effect relationships and that their interpretation of environmental phenomena is basically animistic and egocentric. This and other similar theories have been analyzed in some detail in Barney (1963), using the investigations of Wann, Dorn, and Liddle (1962), Churchill (1958), Moore (1960), and Hebb (1949, 1955) to suggest that young children (three to five years) of average ability are not unready for the many challenges involved in intellectual experience and that they can be assisted by careful guidance to eliminate much of the trial and error learning which involves considerable wasteful misinterpreting and misconceiving. Hebb's "critical periods" hypothesis and Havighurst's (1940) "teachable moment" theory imply that training can be introduced too late as well as too early -- a very important issue in the education of the young highly able child.

The Warren demonstration began 18 months ago in Warren, Pennsylvania, (population 15,000) with a publicity campaign designed to inform the community of the purpose of the project and the procedures that would be adopted. As one aim was to demonstrate that a school administration could operate an early entry scheme, the organization was left to the local administration with the project director acting as advisor, recorder, and evaluator. The project has been extremely fortunate in having an enthusiastic administrative staff, keen to serve the individual children in their district.

The Home and School Visitor, using his preschool survey results, contacted parents of all children in the age group due to be admitted to kindergarten in September, 1963, and invited them to have their children examined by a psychologist at no cost to themselves, as part of the early entry survey.

Of the 257 children listed, all but 28 were brought by their parents for examination. Follow-up visits by the Home and School Visitor showed that some of these 28 families had left the district, but generally they were "disinterested" or knew their child would "never qualify" and so saw no point in the examination. It is suspected that this ten percent will probably provide the lower end, which is at present missing, of the distribution curve of general ability scores (three under Binet IQ 80), when they are picked up for examination on entry to kindergarten in September of this year.

The two psychologists undertaking the survey are well qualified and experienced persons who have worked in the district a number of years and to whom teachers have been accustomed to sending their atypical children. In the first year they made a comprehensive individual assessment of 229 children.

The Goodenough Draw-a-Man Test and the Stanford-Binet (1960 revision) were administered to each child, and ratings of behavior and emotional maturity were made during the test session and while in the waiting room where he could be observed from the interview room.

The reliability of these tools at the preschool level may be challenged by some. To refer to only two sources: Bayley (1955) finds the Stanford-Binet sufficiently reliable at the school entering ages to be "highly useful" and Reynolds, Birch, and Tuseth (Reynolds 1962) report that "enough experience has been accumulated in many communities to establish the reliability and usefulness of individual psychological test results given at prekindergarten ages when interpreted by well-trained psychologists."

In addition to the tests and rating scales mentioned, the Warren parents were asked to complete a comprehensive case history form while the child was with the psychologist and later to act as informants for the Vineland Social Maturity Scale. A check on height and weight was made and the parent questioned regarding the child's health. Where any indication of below par physique existed, the family or school physician was consulted.

In all cases the results were discussed with the parents and in a few, where parents reported problems of training or control, some limited counseling was undertaken. Where any deviancy of a more serious nature (e.g., moderate sensory defects) was detected, the parents were referred to the appropriate sources. Subsequent interviews with parents revealed this final discussion, even where it merely reported the normality of the child's development, to have been greatly appreciated.

These interview sessions averaged 65-75 minutes. Another 20-25 minutes were devoted to test scoring and dictating reports. These will be in the hands of the kindergarten teachers before the children, whether early entrants or regular entrants, arrive at school.

In making their recommendations, no fixed cut-off point and no single criterion has been used. Binet IQ's and Vineland SMQ's of 120-135 have served as guides to a borderline category. In the 1961-62 period 37 children were given provisional or borderline recommendations. Parents of these children were given the opportunity to have the child observed by an experienced kindergarten teacher at a session in the neighborhood kindergarten. These were regular sessions and only one prospective early entrant attended at one time. If the teacher felt she had not been able to observe a typical sample of the child's behavior, she could ask for a return visit. Her observations, along with the psychologist's, were then considered by a committee appointed by the district superintendent. The criterion used to arrive at the final decision was in all cases over-all maturity or "readiness" -- social, emotional, physical, and intellectual -- to benefit from the type of program to which they would be admitted.

The committee made 26 firm recommendations to the parents. This represents ten percent of the total population contacted in the age range 3-8 to 4-8 years (as of September, 1962) and 11.6% of the number actually examined. Although Warren was recognized at the outset as being socio-economically somewhat above average, it was not expected that it would produce such a high percentage of highly able children. All but one of the 26 have Binet IQ's of over 130 (mean IQ 140; mean for total examined, 111). Reasons for this are not yet clear.

The ultimate decision on early entry rested with the parents. Nineteen chose to admit their children.

The 26 families were interviewed to discover reasons for refusal or acceptance and the resource persons in the community they had consulted. Of the seven who were not entered, one family accepted the recommendation but moved from town; another father accepted but the mother rejected and later (too late for entry to be effected) changed her mind; and a third family agreed to early entry but in the week prior to opening of school changed their minds on the advice of a pediatrician who warned of the adverse effect of social immaturity at the secondary school level. Eventual social difficulties were also the prime concern of the other parents -- all parents of boys. Among the parents of the 19 admitted (a higher percentage of them girls than boys), about half reported having decided to accept the recommendation, if offered, before they actually received the notice from the committee.

The numbers are small and care needs to be exercised in making judgements, but there is a suggestion of a social status difference here. Among parents with less education the decision appears to have been simple, based on a combination of pride and their own lack of educational opportunity. On the other hand, among parents who were college graduates some perceived boredom, disinterest, and a need for a greater range of intellectual stimulus for their children not apparently available in the home. Some noted that their children gravitated to older playmates. But it was this group who consulted family physicians, teachers, and grandparents. All reported that the psychologist's advice was the soundest they were likely to get. Recent inquiries have revealed that often the teachers and physicians consulted were no more knowledgeable about early entry practices and findings than the parents themselves and were basing their advice on personal preferences.

The early entrants are spread across the social scale, although tending to the upper levels in both the ranking of the father's occupations and the educational level reached by the parents.

One half of the children recommended were either first or only children, a much higher percentage than in the total population and no doubt a partial explanation for the frequent comment from the mothers that in coming to a decision they had to guard against the emotional reaction against losing their babies. This also fits in with some theories on the development of intelligence which suggest that the only and first children are in a position to receive greater intellectual stimulation from their parents than those in medial positions.

Position in Family

	Total Group N=225 (% of N)	Not Recommended N=199 (% of N)	Recommended N=26 (% of N)
Only	8.4	8.0	11.5
First	27.1	25.1	42.3
Middle	22.2	23.6	11.5
Last	42.2	43.2	34.6

The nineteen early entrants were admitted to their neighborhood kindergarten in September, 1962 -- the ones they would normally have entered this year. Each of the six kindergartens has at least one child in morning and afternoon sessions, and they are being treated as any other kindergartener. Although the progress is being carefully watched this is being carried out as unobtrusively as possible. For example, when any additional testing is being done, some regular entrants are examined as well. The early entrants are not identified for visitors; names have not been revealed to the press; and picture story feature articles have not been permitted. In meeting the special needs of a few of them, there has been occasional modification of school programs (e.g., reading readiness activities have developed from regular activity play sessions) but so far there has always been a regular entrant ready for the same modified program at the same time.

On September 1 their ages ranged from 3.11 to 4.8 years, but a third of them were within two months of the minimum age for entry. Had they not been admitted early these children would have entered kindergarten with MA's ranging from 7.2 to 9.0 years.

The adjustment to school for the majority has not differed from that of the regular entrants. Two have caused the teachers some concern because they appear not to be progressing socially and not concentrating long enough to finish a task. These "problems" are being dealt with as they would if the children were of regular kindergarten age and at the moment do not appear to be of major proportions.

In summary the Warren project is designed to provide information missing from previous studies. It is concerned primarily with procedures and publicizing of early entry and secondly with follow-up of the children. In contrast to basic research technique, modifications are being made and evaluated as the demonstration continues; new problems arise and are investigated as side issues; incidents which would seriously affect the controls of a laboratory study are here recorded as natural hazards, analyzed and investigated to discover how they could have been prevented so that they may be avoided by a school district which may want to implement an early admission policy.

As yet it is too early and numbers are too small to warrant any detailed evaluation; hence, the descriptive nature of this report. Reports on the project as it progresses may be obtained from the author of this paper or from Dr. Jack W. Birch, Principal Demonstrator and Chairman, Department of Special Education and Rehabilitation, University of Pittsburgh.

References

Bayley, N. On the growth of intelligence. American Psychologist, 1955, 10, 805-818.

Barney, W. D. Early admission to school for mentally advanced children: an aspect of flexible admission and progression. Paper read at Conference on Critical Issues Involving State Department Education Directors of Programs for the Gifted, Pittsburgh, March, 1963.

Birch, J. W. The effectiveness and feasibility of early admission to school for mentally advanced children. Paper read at National Education Association Conference, July, 1962.

Churchill, E. M. The number concepts of the young child. Researches and Studies (University of Leeds, Institute of Education, England), Part I, 1958, No. 17; Part II, 1958, No. 18.

Havighurst, R. J. Developmental tasks and education. Chicago: University of Chicago Press, 1948.

Hebb, D. O. The organization of behavior. New York: Wiley, 1949.

Hebb, D. O. The mammal and his environment. American Journal of Psychiatry, 1959, 3, 826, 831.

Moore, O. K. Orthographic symbols and the preschool child - new approach. New Educational Ideas: Third Minnesota Conference on Gifted Children. Minneapolis: University of Minnesota, 1961, 51-101.

National Education Association. Admission policies for kindergarten and first grade. Circular # 3, Washington, D. C., NEA, 1958.

Piaget, J. The child's conception of the world. New York: Harcourt, 1929.

Piaget, J. and Inhelder, B. The growth of logical thinking from childhood to adolescence. New York: Basic Books, 1958.

Reynolds, M. C. (Ed.) Early school admission for mentally advanced children. Washington: Council for Exceptional Children, NEA, 1962.

Wann, K. D., Dorn, M. S., and Liddle, E. A. Fostering intellectual development in young children. New York: Bureau of Publications, Teachers College, Columbia University, 1962.

William David Barney, Visiting Research
Professor, School of Education, University
of Pittsburgh, Pennsylvania

A CONCEPT FOR TOMORROW: THE PARENT COUNSELOR

Ray H. Barsch

The greatest obstacle to widespread and significant advancement of the field of special education has been the failure of community school systems to find a mutually comfortable technique for successfully incorporating the parent of the special class child into a reinforcing role of value to the child's learning advancement. It would be difficult to find any assembly of teachers of retarded, blind, deaf, aphasic, etc. who do not vocalize freely about unrealistic aspirations of parents, lack of understanding, refusal to accept the child's limitations, over-dependency, over-solicitousness and a host of other negative comments. Like the weather, everybody talks about parents, but nobody does anything about them.

The extensive influence of psychiatric theory upon education has helped to create the impression that parents of handicapped children are guilt ridden, anxiety laden, rejecting beings who are inclined to be troublesome to professionals in clinics and schools. Many school people complain that parents have little or no understanding of what the school is trying to do for their child. Many feel that parents fail to accept their child's need for special help. The list of complaints against parents is lengthy. The amelioration of all such problems is left in the hands of the classroom teacher, or in some cases private casework agencies in the community may come to the teacher's rescue and accept parent referrals.

Parents with handicapped children seldom have any awareness of what schools have to offer their child until the child reaches school age and some placement is necessary. Seldom do they concurrently receive an orientation to the totality of the special education department so they might learn how their community school system has organized to meet special needs. They often come to the schools laden with anxieties built during the first five years of a child's life by less than adequate diagnosis or a confusion of diagnostic terminology which they do not understand.

The formality of schooling, regular or special, has traditionally been a major technique for transmitting the cultural heritage of the nation to its citizens and a preparation for productive adult citizenship. The parent also bears the same two basic responsibilities. Parents and educators by virtue of their chosen roles accept a mutual responsibility toward the child.

Many years ago it was felt that this unity of purpose in seeking the best possible educational milieu for each child might be fostered by formation of a parent-teacher association devoted to the principle of mutuality and togetherness. Every school has one of these much in the same manner that every family has a car. Unfortunately, most of these become vehicles of operation for a few dynamic parents in leadership roles with a perpetual annual campaign to entice a better turnout for each monthly meeting. Program chairmen in local communities struggle desperately to find speakers or panels who might painfully brave whatever elements may exist on the monthly meeting night to continue to search for the nebulous togetherness "between teacher and parent." Few communities contain enough professionals capable of standing before an audience and helping parents understand some critical point in child development or education to sustain a PTA over a period of several years. As a result, program chairmen find themselves scheduling a speaker to regale the group with a silent-picture lecture version of his canoe trip along a distant river. This is scheduled in the hope that such a program will attract "more of the fathers." Because no program chairman wishes to be accused of over-lengthy meetings and the custodians wish to close the building early, this venture into educative mutuality is usually limited to a 30 minute burst followed quickly by a "social hour" of coffee and cookies. It is not at all unusual to find teachers of the school clustered in a group as if providing an insulation to each other against possible infiltration from some intrepid parent. Little effort is actually devoted to the togetherness of teacher and parent at the PTA meeting since the parent literally gets his "turn at the teacher" at the annual "open house" and the periodic teacher conferences. In some quarters where some form of special class may be located in the elementary school, it is considered highly desirable to integrate "these parents" with the "regular" parents for PTA purposes. In other quarters, the attempt may be made to have two PTA's within a single school because the needs and problems of "these parents" and "regular" parents are different.

This effort on the part of most schools represents the major process of parent-teacher relationships other than some compulsory system of reporting periodically to parents on a child's progress. Even in this matter of reporting at intervals to parents, there are staunch advocates for each of 20 to 30 different ways of accomplishing this.

Many administrators will now rise up in arms to proclaim the fact that school systems all over the country are increasingly employing more and more psychologists and school social workers to meet this very need. Unfortunately, each school system contains enough children with "acute" adjustment problems which are of immediate concern and quickly monopolize the full schedule of these special people. The demands for immediate attention scarcely leave any time to be concerned with the "plain vanilla" parents whose children present no unusual adjustment problems and seem to go along "in a nice typical way" from September to June. For the most part, these specialists are unavailable to the average parent because the "emergency waiting list" far exceeds their time allotments.

Consequently, most American parents talk to their child's teacher once, twice or three times each year unless they happen to warrant further attention by virtue of "acute" problems in their child. Some parents have never personally talked with their child's teachers during an entire elementary school experience. Somehow or other, most parents seem to have a blind faith in the school, believing that everything is "going along fine in the way it's supposed to go, unless I hear to the contrary."

The teacher who is empathically identified with the child often finds herself in the position of the gardener who has so painstakingly hoed and raked his ground, and planted his seeds in neat rows. Standing back in a state of satisfaction, he muses on the wonders of the future which will come into blooming beauty from his careful work, only to be abruptly dismayed by an errant child galloping over the hallowed ground and ruining the tender handiwork. It is frequently the parent who is perceived by the teacher as the culprit who disturbs the handiwork she has wrought in the child. Like the gardener, the teacher has only one recourse -- to hoe and rake and plant again.

The teacher's business is child learning. She has been trained for this in four or five years of academic work and internship and has probably matured in progressive competence by virtue of her efforts with hundreds of children who have passed through her classroom. Her obligation to the child is by cultural and national objective so vital and compelling that it is unfair to demand that she incorporate the additional role of a parent counselor into her chosen profession. She was not trained to do this, and if the private comments of hundreds of teachers can be considered representative, she tends to regard this aspect of her job with a high degree of anxiety.

In the field of psychotherapy, there seems to be a universal agreement that the therapist who works with the parent cannot become the therapist for the mother. There cannot be a conflict of empathies. In political life, a conflict of interest is regarded as a barrier to efficiency and loyalty. When it comes to parents and school, however, the relationship is regarded as prosaic, routine, and a necessary, albeit unhappy, component of a teacher's role. Nobody else seems to think that the parents are a vital ingredient in proper education, so why should the teacher? The parent may suddenly become important when a problem arises or when this parent becomes a voter who must be wooed for the upcoming referendum.

None of the theories of personal dynamics which now guide workers on all fronts of human welfare stemmed from the study of dynamics among parents of handicapped children or, for that matter, from the study of any kind of parents. It is a most interesting phenomena to observe the ease with which clinicians of various orientations and dynamic creeds can take a single item in behavior, or a cluster of behaviors, and conveniently identify and allocate these to positions on the trunk of some theory.

If the parent and the special class teacher are both to fulfill their obligations to the child, some new considerations must be given to novel approaches to parent education. The business of parenthood is child-rearing, while the business of the special class is to teach specific skills and behavior to aid the child to manage progressively more complex formal learning materials. The two goals are separately assigned but are not mutually exclusive. They are also not interchangeable. Parents who try to become professional teachers with flash cards, word drills, reading lessons, etc. usually do a poor job.

Teachers who try to become substitute mothers usually do a poor job. Neither the parent nor the teacher should attempt to usurp or assign each other's role. If each carries out the traditionally assigned role, the unity of purpose is gained.

Literally hundreds of behaviors which are completely outside the purview of the classroom must be established by parents. The more that schools are baited into the trap of fulfilling parental responsibilities, the more dependent become the parents upon the schools to expand services into non-educational areas of behavior. At the opposite pole, the attempt to turn the family kitchen table into an extension of the classroom is an intrusion into family living. If the class curriculum is so extensive that it cannot be managed except by extending the child's exercises to kitchen table for "over-time" in the form of homework assignments, then perhaps the school day should be lengthened or the curriculum reorganized.

The family home can be viewed as a laboratory for learning a system of moral values, interpersonal living, table manners, prayers, personal hygiene, leisure time skills, household responsibility, respect for property, and countless other lessons. All of these can be taught to children using the same principles of learning employed by the teacher in the arithmetic lesson. The parent in the home may help the child to generalize from his classroom learning into family activities of daily living. This task, of and by itself, offers the parent a lengthy list of possible activities which are so numerous that to pause in parenthood to teach number combinations represents a diversion from the basic obligation.

Let each laboratory be concerned with its own set of behavioral experiments and explore their respective areas in depth. Each might be interested in the work of the other and remain acquainted with particular results and problems, but content themselves primarily with their own work.

If such a dichotomy has any validity, it follows that a new type of professional is called for on the educational scene. Somehow, a procedure must be developed to acquaint the parent with principles of learning and the obligations and techniques of child-rearing. A procedure must also be found to help the parent understand the mutualities as well as the separations. The professional specifically conceived to fulfill such an obligation is a parent counselor.

The parent counselor would function as a member of the staff of the special education department of a community school system and carry a full-time responsibility for the development of parent counseling relationships. Specific special classes would be assigned to this counselor and the parents of the children in each class could be organized into counseling groups. Initially, mothers might meet in weekly group sessions throughout the school year. Since most children in special class units tend to remain in the same group over a number of years, the sessions could be spaced at two-week intervals during the second year and gradually lessen in intensity in succeeding years. Some groups might be organized as couples' groups requiring the participation of both mothers and fathers. Groups organized for fathers only might meet during evening hours on a less intensive basis.

Part of the parent counselor's responsibility would be to make home visits to become acquainted with the totality of the family in its own milieu. Meetings would be held in the school building. For greatest effect, the installation of a classroom observation window would allow parents to unobstrusively observe activity with accompanying commentary from the parent counselor.

The parent counselor would serve as the principal liaison agent to community clinics, agencies, physicians and other professionals who might become involved with the problems of a given family. He could represent the school in various agency or clinic staffings.

More progressive units of special education might also consider the possibility of providing group counseling experiences to parents of preschool handicapped children who will eventually become members of special classes at a later age. Such a program would enable educators to acquaint parents with the various criteria established for special classes, to orient parents to expectancies of behavior to be achieved by the age of admission, to help parents devise techniques for achieving such preschool behaviors, and could serve as a means of obtaining valuable developmental data on a cumulative basis long before the child must be assigned to a classroom.

The preschool counselor might be considered as a second step in developing an adequate approach to the parents of handicapped children, but the parent counselor in the special class structure is nominated for the top priority. School administrators and special education supervisors might do well to give some serious consideration to the initiation of a program of parent counseling. This is not a luxury item to be rejected because of budgetary limitations. Careful consideration of the long range benefits to special education will reveal it to be an economy and a significant concept for advancing curriculum. Such a program of continuing parent education could:

1. Serve as a vehicle for reporting on and discussing child progress in the classroom.

2. Serve the purpose of systematically discussing the purposes and objectives of special class curriculum and allow for discussion of particular methodologies employed by the teacher to teach those objectives.

3. Serve to permit scheduled observations of classroom activity under the direct guidance of the parent counselor so that pertinent behaviors might be pointed out to illustrate discussion material or heighten parental sensitivity to certain behavioral patterns in children generally or to a specific pattern in a single child.

4. Serve as a continual feedback to the teacher on the manner in which classroom learning is becoming manifest in the child's family-community life, as well as to provide a source of information for the teacher regarding significant family dynamics and behaviors which would allow her to integrate such data into her day by day relationships, to the benefit of the child's development. This feedback would come about in reguarly scheduled sessions between the teacher and the parent counselor where individual cases would be reviewed and specific objectives set for future effort. The teacher would provide the parent counselor with child learning data while the parent counselor would provide significant family data obtained from analysis of parental comments and behavior. During this exchange of data, case planning and educational objectives would be set for both the child and the parent.

5. Provide the parent the opportunity to clarify questions, rumors, medieval myths and legends regarding her child's handicap and that of others.

6. Provide a community orientation for parents to acquaint them with various diagnostic and therapeutic public and private agencies existing within the local community or nearby which might in some manner be pertinent to their particular problem.

7. Provide a continuing orientation to special education philosophy of the particular school system and the panorama of special services arranged for children beyond that with which the parent might be personally familiar because it serves her particular child.

8. Serve as a sounding board for reaction to various administratively or

professionally contemplated modifications in special programs. It might also serve as a vehicle for generating enthusiastic support for programs of broad community orientation to the special programs, or for referendum matters which must be eventually acted upon by the community voters.

9. Serve as a learning situation for parents in which they might gain a broader and deeper understanding of the particular nature of their child's handicap and the relationship between the handicap and problems in learning.

10. Serve as a method for helping the parents learn sound and proven principles of child learning which they might employ in their daily relationships with their child and his siblings.

11. Serve as a method to develop reinforcements of classroom learning in the home situation by helping the parents to structure learning opportunities in the home and family settings and routines which will help the child to generalize from his classroom learning into daily family and community life. The effort here would be devoted to finding ways in which the parent might arrange child rearing practices according to the same set of learning principles which the teacher is using for academic progress. The welding of practices of parents operating in their sphere of influence -- child rearing -- and of practices of the teacher operating in her sphere of influence -- classroom learning -- into intensive units of impact would serve to provide multiple learning opportunities for the child in different settings explicitly directed at a single goal. The achievement of this kind of unity of effort would serve to maximize the learning at all points.

The problem next becomes the matter of defining the professional characteristics of the parent counselor. Such a professional must have an adequate understanding of the educational methodology in all types of special education. He or she must have a deep understanding of the nature and dynamics of various child handicaps and must have a solid background in personal dynamics. Most professionals associated with education qualify on only one of the three characteristics, but this is a starting point. Until university programs can be organized to offer specialized training, school systems courageous enough to initiate such a program will have to rely upon existing personnel converted to such assignments, and they will have to supplement and support their work with available course work in areas of deficiency.

The training of the parent counselor must be different from any preparatory curriculum which now exists in any college or university if the full efficiency is to be attained. The training program must be at a graduate level limited to professionals, trained and experienced in classroom teaching for special children, social case work or psychology, who wish to obtain advanced training to equip themselves for effective functioning in this new profession. Courses in special education theory covering all sizes, shapes and varieties of special class children; family dynamics; child rearing; group and individual counseling techniques; psychological learning theory; etc. would make up the advanced training program.

Although initial reaction to this concept may be to view it as highly unrealistic, its structure has been experimentally proven during the past eight years in the Easter Seal Child Development Center in Milwaukee. While it may be argued that success in a private agency setting does not necessarily recommend it for adoption in a public school setting, the fact that such a program has been actively and effectively developed in the essential form described in this paper must negate the question of unreality. While the size of the Easter Seal program can scarcely be compared to the special class set-up in a large metropolitan school system, it does compare favorably with what one might expect to find in a community of 100,000 people, or less. In addition, the fact that the bulk of the programs at the agency are devoted to preschool handicapped children suggests that the effort might be even easier to establish for parents of older children. The Easter Seal program has proven to be of great personal value to the parents and exceptionally effective in maximizing the teaching effort with the child.

Some guidelines have been set and a model has been offered as a novel approach to parents of handicapped children enrolled in community school programs. It now remains for some intrepid special education director experimentally to set the model into action.

Ray H. Barsch, Professional Director of
Services to Crippled Children, Jewish
Vocational Service of Milwaukee, Wisconsin

HAIL THE CONQUERING DOLPHIN--AND OTHER REFLECTIONS ON THE PRE-SERVICE PREPARATION OF TEACHERS

Burton Blatt

Being somewhat preoccupied with the problem, it is a rare day when I do not chance to see an article or a book dealing with teachers and how they are -- or should be -- prepared. Certainly, this problem is not suffering from a scarcity of people writing and talking about it. However, in spite of the diligence being brought to bear on this area of concern, one finds it difficult to substantiate the notion that teachers are being prepared today in ways that are distinctively in contrast with preparation practices twenty years ago. In this same regard, one must contrive in order to explicate differences in pedagogical practices with children between that decade and the present one. To be sure, there are exciting -- if equivocal -- suggestions that cause us to hope that American education is now on the periphery of a great, unprecedented era of excellence. It has been predicted that programmed instruction will reshape the schools, will reinvigorate education for all of our children, and will restandardize the model of the American teacher. Such recent innovations as the ungraded school, team teaching, and specialized programs for children with special needs lend compelling support to the prediction of a golden era. For those who have been intimately concerned with teacher preparation for five or more years, it is somewhat startling to realize that, within our school of education, we now have psychologists, sociologists, anthropologists, as well as educationists. Although it is not possible to speak with certainty on this matter, one has the vague conviction that professional educators have some responsibility for an alliance with this new breed of professor as well as for the introduction of more liberal and broadening curricula offerings in schools of education. Notwithstanding our considerable accomplishments and the promise of far more important ones, it does not appear inconsiderate to mention that we have done far more than we have proven, or even tested. Without any attempt to belittle the serious research of distinguished scientists, I must confess that I find a rather serious discrepancy between the carefully reported work of a few and the application of research findings in both our public schools and our college preparing centers. Specifically, although we have introduced some interesting ideas into our public school curriculum (programmed teaching and the like) and our schools of education are somewhat different from the model we were familiar with as students, things are more the same today than they are different; more interestingly, in matters of greatest importance, both things and times have changed very little. We continue to graduate and certify teachers who have spent four passive years presenting themselves to their professors as ignorant people asking to be told the facts and theories associated with their lives and their teaching. They have not been presented with an environment that forces them to ask the question, "What do I know?" They have not been given opportunities to develop skills in observing phenomena around them and in making distinctions between what one sees and what one infers. They have not been able to discover how much they can do for themselves, what they can teach themselves, and what they do know. Similarly, when these students enter the teaching profession, they assume one of two positions: (a) I admire the type of education I received and will, therefore, educate the children in my class in the same manner; or (b) I must guarantee that children in my class will never experience the horrible education foisted upon me. In either case, the teacher must rely upon his own educational experiences in order to develop whatever pedagogical principles he wishes to stand for. It is this incredibly complex phenomenon, that I comprehend too superficially, that has delayed development of all of the resources presently being expended on behalf of our school children.

This paper represents some personal convictions, important to one trying to help university students appreciate the power of their gifts and the awesomeness of their responsibilities as teachers.

The Character of the Humanist

Within recent months, I have had opportunity to learn of several animal studies that are presently being conducted. A distinguished scientist is developing designs to observe the higher-order problem solving potentialities of monkeys. He has some interesting notions relative to the heretofore determined uneducability of monkeys in regard to: toilet training (monkeys have great difficulty in being toilet trained; this on the other hand is a simple task for dogs, cats and other domesticated animals); gentility (monkeys have been noted to have vicious tempers when in custody); and language (monkeys have not learned to communicate in meaningful ways with humans). This scientist suggests that the uneducability of monkeys may be due to: (a) the ways they are handled in experimental environments (locked in cages and isolated from intellectually stimulating experiences); and (b) the unsophisticated and weak interventional programs designed to educate these animals. He proposes experiments of the kind that: (a) provide monkeys, as soon after birth as possible, with a natural human-like home life, i.e. being a part of a loving and responsive family: eating, sharing, playing and being communicated with by other members of the family; and (b) provide them with a learning enviornment powerful enough to develop communication skills. This scientist explains previous disappointing results obtained in teaching monkeys higher-order problem solving in much the same manner as earlier marasmus studies described those conditions that gave rise to decrements in physical and intellectual behavior. Monkeys, it appears, need the love and companionship that humans crave. Without these, they wither.

There have been reports purporting to assess the intellectual abilities of dolphins. Some scientists are convinced that the dolphin is a very intelligent creature and is capable of learning a system complex enough to communicate with humans. I have had a compelling need to consider where the above mentioned experiments will lead to. Obviously, some scientists believe that certain of our animals can be taught to either speak -- as we do -- or, at least, learn a system for meaningful animal-human communication. Let us suppose this task is eventually accomplished by a species of animal. Let us further suppose that the dolphin learns a language that we understand or we learn a language that he understands. If this occurs, we may learn that the dolphin has a soul as well as a mind. If he has a soul, he has -- or can find -- a God. In that instant when animal demonstrates both mind and values, all animals are changed and all humanity is different.

My dilemma had been -- what now do we call the dolphin? Certainly, we could no longer provide (or find) this creature with a "humanizing" theology and then, with one caprice or another, send him to test the existence of his maker. Certainly, our legal codes would require drastic revision. Until my absurd lack of logic was corrected by a student, I gave eloquent plea to a notion that when the dolphin demonstrates mind and values we must consider him "human-like." The student could not agree. He was unable to define what human is and, with refreshing honesty, he admitted he was not sure who is and is not human. However, he was sure that the dolphin is not and never could be human. With one burst of logic, he said, "The dolphin is dolphin." This is right. Even when the dolphin is found to be brighter than humans and even when the dolphin is found to be possessed with greater compassion, it would be the height of human presumption to say, "Now you are human." If the dolphin is found to have greater intellectual and moral qualities than man, he would have less a colossal presumption if he then said to man, "Now you are dolphin."

It may be that, within the human race, we have too long held to a model of "humaness." Those outside the model (the mentally retarded, the mentally ill, and the severely physically handicapped, the derelicts of our society) have at varying times, both explicitly and implicitly, been considered subhuman. Maybe it will be the dolphin to show us the error of our presumption. Maybe someday an animal, or a being from another planet, will show us that all humanity is humanity. If we are not superior as a species, we may become prideful of the uniqueness rather than the contradistinctiveness of humanity. Maybe this is the philosophy of the humanist.

Most teachers enter training programs with strong humanist convictions, i. e. man, his interests, and his development are dominant preoccupations of university students preparing as teachers. I am not sure how we can best reinforce the exemplary convictions that students confront us with. However, I am distressed with the notion that the day of the humanist is over. I am distressed by the cynicism, within our literature and our universities, that begrudges the humanism our students come to us with. Now and for all time, the teacher is first a humanist. Hail to the conquering dolphin. But, to paraphrase Steinbeck, it has also been said that only man has the word and the word is man.

The Redundancy of the Teacher as an Artist

Our literature abounds with terminology referring to the "art of teaching" and the "teacher as an artist." Subsumed here is the concept that the process of teaching requires pedagogical artistry-- equally requiring scientific inquiry -- and that the teacher is an artist as well as a scientist, applied psychologist and technician. Obviously, all teachers -- to one degree or another -- apply principles of psychology to the ways they cope with an understanding of children; teachers are prepared to use certain approved techniques in presenting reading, music, social skills, and other curricula materials. Certain teachers, with unusual preparation and more than unusual insights and motivation, both appreciate and implement the "scientific method" in appraising children's capabilities and in searching for answers to puzzling questions. Certainly, a strong and eloquent case can be presented for illuminating and, thus, specifying the image of the teacher as a scientist, as an applied psychologist, and as a technician (or as an imparter of facts and a developer of skills).

On the one hand, however, we are dealing with tools -- psychological insights and materials, methods for teaching, principles for investigation -- and on the other hand we are dealing with what one is engaged in, the artistry of teaching. The redundancy here is plain. We may not talk about the teacher as an artist for the teacher is an artist. We run the risk of pedantry when we define commonly used words for literate audiences. However, although commonly used, the word "artist" is much abused in our society. Amateur cooks have been called artists; and so too have our local athletes. The problem of communicating an understanding of this term becomes infinitely complex when we realize that there are literally no synonyms for art, the product of the artist. Therefore, we apply analogical methods to describe what we judge art to be and the commitment we make to it. Art involves aesthetics, beauty, skills. It requires the systematic use of means to attain some end. These are definitions one can find in a dictionary; however, all art has one great, vaguely realized, objective. All art requires both communication and knowing. Put another way, to discuss the proposition that the teacher is an artist, we might better discuss the notion that the artist is a teacher. I fail to see the fine distinction between Sinclair Lewis, the artist, and Sinclair Lewis, the teacher, in much the same way that I fail to see the fine distinction between John Dewey, the teacher, and John Dewey, the artist. Both men were creative rather than mechanical; both communicated wisdom; both caused men to be inspired, to learn, to seek intellectual adventures, and to develop as human beings. None could place a monetary value on their contributions; these were priceless. There were no yardsticks to measure their achievements and no rule to give them just recompense. There was -- and is -- controversy relative to their contributions. Neither could have been elected mayor in Sauk Centre or parks commissioner in The Bronx. Yet, both were loved and admired all over the world. There are much too many things that are common to both the great teacher and the great artist, things that rule out the inference of coincidental relationship. The great burdens that have beset us in this age of merit ratings and "promotional opportunities" may have antecedents strikingly similar -- in form if not content -- to those that give rise to debates concerning the worthiness of a particular sculptor or musician. Who knows how to prepare an artist? At this point, maybe we have made some progress just in being able to say that the teacher is one.

The Teacher as a Scientist

It has been said that those qualities that make the human being a great creative force, an artist, make him a very poor measuring instrument. Artistry characterizes teaching; science measures our effectiveness and gives us principles and tools to improve our skills. Facts, laws, the phenomena of change in an environment are all the concern of science. Teachers must be trained to observe, to discover that what they observe and what they infer must be held separate; or an already complex task becomes completely unmangeable. The processes of observation and inference are strongly affected by the prejudices a teacher brings to the observational task. Simply, the task of preparing the teacher as a scientist concerns itself with helping the teacher understand her prejudices so she may deal with them more effectively.

There are many examples that can describe the universality of teacher prejudice. In my field, special education, there are strong currents that demand the integration of mentally retarded children into regular classes. In discussing this question with a group of my students, all felt that, under all circumstances, mentally retarded children should be integrated into the regular grades; for them, this was an invariable principle -- or should we say prejudice. Some students, who are either teachers or supervisors, described model integration programs in their schools. One, who is a principal of a typical school, informed us that the children in his school who are mentally retarded are placed in special classes. These children are integrated into as many regular classes as possible. When I questioned him about the reason for the integration, he informed us that integration is desirable. In order to strengthen his argument, he further told us that children not in a special class -- i.e. children from the regular grades -- are sometimes placed in the special class for special periods of help. There are several puzzling aspects to this situation. Doesn't it seem strange that we identify and diagnose certain children to be in need of special help, place them in special classes, and then, after they are placed in the special program and labelled as mentally retarded, we replace them into the regular grades. On the other hand, there are children from the regular grades who, from the standpoint of time, seem to be in need of as much special class work as do the special class children. The question to be asked is, "Why is one group considered mentally retarded and not the other?" Another question we may ask is, "What is the special significance in placing children in regular class environments?" A more sinister question could concern itself with the types of regular class assignments afforded these children. My somewhat informal survey discloses that these children are placed, not in classes that they necessarily need, but in situations that will give guarantee of a passing grade because either the teacher is sympathetic and will modify things for these special children or the class does not require academic competencies of the kind that cause difficulties for mentally retarded children. ---- When one has strong prejudice -- either for "good" or "evil" -- he must make an effort to understand the nature of his prejudice and how to deal with it.

Another example of unrecognized teacher prejudice revolves around the problem of dealing with a child who has a problem with a teacher. When we test the hypothesis, there is at least some possibility that the teacher is partly to blame. In the physical sciences, when A matter combines with B matter in a way to produce a specific reaction, unless both A and B are tested, it is not possible to determine whether A or B or the combination of both are needed to produce the reaction.

The problem of labelling certain children and then behaving toward them in a way that is guaranteed to make the label come true has long been a concern of special educators.

Heisenberg said this another way, "The better one defines the position, the more indefinite the momentum becomes, and vice versa...." It almost seems as if, when we label a child as being mentally retarded, we grant ourselves the privilege of explaining every aspect of his behavior as being directly related to and caused by his mental retardation. To put this another way, the prejudices we have about certain individuals -- as reflected in our labels of them -- are calculated to change both our behavior toward them (in contrast to our behavior toward individuals not so labelled) and the behavior of the individuals themselves. Quite obviously, the student of education who is not a trained and astute observer cannot function as a scientist; basic to all science is the understanding and control of one's prejudices.

Recommendation

There are several crucial problems, related to the preparation of the teacher in the ways we have discussed, that deserve our most serious attention. However, time does not permit us to do more than mention them here. I am disturbed by the insufficient payoff accrued in the technical and theoretical preparation of our undergraduates. Many teachers have undeveloped skills in educating around defects and in remedying that which is remediable. Many teachers have no clear notion of the goals they are seeking, and the most important thing about any matter is the idea -- without the idea we do nothing; with it, man is in control and can progress. Related to the above is my observation that we seem to be abrogating our curriculum franchise. There is a movement to throw out all the careful work of the teachers who have preceded us. There is a movement to "start fresh." The IQ test does not measure capacity (in fact, this is a gross understatement) -- so let's throw it out. The typewriter that is preparing this report does its job admirably; but it doesn't fly. Do we throw it out? I am concerned about our inability to distinguish between the purposes and procedures of research and the responsibilities and tasks implicit in serving children. I am sensitive to the inefficiency and wastefulness of conventional student teaching models. These are problems that are amenable to solution or, at least, better understanding.

My recommendation is not one that will "save" American education. However, our experiences lead us to believe that it is a fruitful beginning in coming to grips with the real issues involved in preparing teachers. Several years ago, we developed a seminar for teachers preparing to work with children having special needs (The Preparation of Teachers: An Unstudied Problem in Education, 1962). In brief, we provided students with the opportunity to observe children -- and each other -- over a long period of time for the purpose of developing their skills in observing human behavior and in formulating relative inferences. It seems appropriate, at this time, to describe something about the seminar group we have this year. Our clinic is located on the ground floor of a building in a state school for the mentally retarded. All of our students are preparing for professional work with retarded children. We have several classrooms, two with observation rooms containing one-way vision and monitoring sound. At the first meeting of the group in the fall of 1962, we were confronted with approximately 20 students who let it be known that they were there to learn how to understand and teach the mentally retarded. Our first remarks to them were:

> As you know, each time we meet, you may have the opportunity to observe a class of young children. It isn't possible to observe a class or any social gathering for even a few minutes without questions popping into your mind or without coming to some sort of a conclusion or opinion. The one obligation which you have is to bring into the open your reactions to any observation. To the extent that you can feel free to articulate your reactions, you and the rest of us will learn from each other. One of the things you must guard against is keeping your ideas, questions, and opinions to yourself because you do not know whether they are right or wrong. If you do remain silent you, of course, increase the chances that you will be unable to evaluate your reactions, other than in a subjective, private manner. This is an opportunity to learn, by which we mean an opportunity to

> change your ways of thinking and acting. If you do not actively participate in this market-place of ideas, you will be short-changing yourself. At this moment, you probably look upon your instructors (we have four instructors for this clinic) as "experts" with whom it would be foolhardy for you to disagree. We do not view ourselves in this way, and we hope it will not be too long before you see that we do not observe everything and that we will be disagreeing with each other. The fact that we have had more experience than you should not intimidate you into automatically mistrusting or devaluating your reactions.
>
> There may be times when we do not wish to observe children. You will soon realize that you share in both the substance (content) and the physical management of this seminar. It is your responsibility as well as ours to provide a direction for this seminar.

From the first day, and for several weeks thereafter, the students were very anxious to know more about these "mentally retarded" children. They wanted to review the case records on each child and they wanted us to tell them the cause of the retardation. We asked that they observe the children and discuss questions relative to the behavior of these children and their inferences leading to a designation of "mental retardation." In time, these students convinced themselves (quite accurately) that these were, in fact, not mentally retarded children. (These youngsters are participating in a research project designed to study the effects of special education interventions on the prevention of learning difficulties of so-called culturally deprived, otherwise typical, children.) Our students began to realize that the processes of observation and inference are ways of investigation that increase greatly the scope and insight of the teacher prepared with these skills. During the course of the school year, our university students observed and dealt with almost every major problem confronting all who work in the behavioral sciences. As often as not, they did not observe children during a particular session. There was so much time needed to deal with one's own prejudices, with one's need for dependence on the instructors, with one's habit -- nurtured during many years of formal schooling -- of passively waiting to be taught. At mid-year, an interesting situation presented itself -- a student who, through charm and persistence, convinced us that she should enter the seminar at mid-year. During her first session with us, she asked the question about "the mentally retarded children in the classroom" (in fairness, one would expect to find mentally retarded children in a classroom in a state school for the mentally retarded). Immediately, a number of students said to her, "Why do you say these children are mentally retarded?" At that point, both students and instructors realized that something very significant had taken place during the preceding months.

This section is located under the heading, Recommendation. I hesitated in using so strong a term to describe our experiences in this seminar. At this time, we have not sought evidence of the kind that can be labelled "research" to validate the efficacy of our approach. However, this experience, as described in our book and but briefly touched upon here, has been a great learning adventure for our students and, in many ways, especially for us. We have rediscovered -- but so much more clearly now -- that teaching requires sustained intellectual discipline, continuous self-evaluation, control of one's prejudices, sheer undefinable artistry, and the humanism that we all must have. As one seminar student so beautifully put it, "We are wrestling here with our own retardation, not the retardation of others."

References

Sarason, S.D., Davidson, and Blatt, B. The Preparation of Teachers: An Unstudied Problem in Education. New York: John Wiley and Sons, Inc., 1962.

Burton Blatt, Professor and Chairman,
Department of Special Education, Boston
University, Massachusetts

A PRIVATE AGENCY APPROACH TO PROGRAMMING FOR THE REHABILITATION NEEDS OF EXCEPTIONAL CHILDREN IN HIGH SCHOOL

Jean L. Bloom

In 1959, the Federation of the Handicapped, under a research grant from the United States Office of Vocational Rehabilitation and in cooperation with the New York State Division of Vocational Rehabilitation and the New York City Board of Education, instituted a special prevocational evaluation program for homebound high school students. The 11th and 12th grade students were either too physically disabled or too emotionally disturbed to attend a regular school program and were receiving instruction at home. The types of physical disabilities included asthma, various cardiac diseases, hemophilia, cerebral palsy, postpolio, brain tumors, epilepsy, and muscular dystrophy. Emotional disabilities ranged from acute anxiety and depression to school phobias and schizophrenia. Many of the students were multiply disabled, some having a combination of physical and emotional problems and some learning retardation. Their ages ranged from 14-20 years. Most of the population had been disabled and on home instruction for more than two years. Many students had been disabled from birth and had never attended regular school. Their IQ's ranged from 58 to 136, with most youngsters falling in the bright normal category.

The Goals of the Project

1. To provide a setting offering to homebound adolescents educational, social, psychotherapeutic, group, and work experiences not otherwise available to them (In many instances, the culmination of these services and the use of the team approach enabled students to overcome the factors causing their "homeboundedness" so that they have been able to plan for further vocational training, higher education, and competitive employment.)

2. To develop and standardize the type of work evaluation and work experiences best suited for this population

3. To develop techniques that might be used to determine and measure the students' growth along a continuum of "readiness" for training or employment

4. To develop research evidence related to vocational, social, and psychological problems confronting homebound students and to investigate what combination of factors render them homebound

The Screening Process

The students were first referred by special liaison consultants from the Board of Education to the supervisor of the school unit at the Division of Vocational Rehabilitation, who later referred them to the project coordinator.

The screening process included:

1. Intake interview with both parent and child (Home visits were made whenever necessary.)

2. A general medical examination

3. Psychometric testing which included the WAIS, Bender Visual Motor Gestalt, and other projective tests

4. Vocational testing which included reading assessment, tests of special ability, and aptitude.

The Program

The service program was conducted two days per week at the Federation of the Handicapped, with two groups of 20-25 students. The groups were divided into the emotionally disturbed and less severely physically disabled, whose problems were considered psychophysiological, and the more severely physically disabled. Special transportation was provided for those students who were too physically disabled to use public transportation. One-third to one-half of the students required special bus transportation in order to be able to participate in the program. Some students needed encouragement and training in using braces and crutches rather than relying on wheelchairs. Others required training in the use of the public transportation system or in the use of taxis.

Prevocational orientation and evaluation in clerical, bench assembly, hand tool, and machine shop areas were included. In addition to this, a special evaluation course at the college level was provided for those students who had the ability or desire to attend college. Additional achievement testing was provided for this group also. In the workshop area, stress was placed on the development of good work habits and attitudes such as good attendance, punctuality, assuming responsibility for quality and quantity of production, and learning to work under supervision. Individual and group vocational guidance was provided for all students.

Group and individual psychotherapy was provided for students who had emotional problems which interfered with their functioning. Approximately two-thirds of our population were in need of this service. A psychiatric consultant functioned as a diagnostician as well as the supervisor of the two therapists.

Remedial reading was provided by a New York City Board of Education teacher for all students reading below a 6th grade level. About 50 percent of the population needed this type of service.

Paid work experience, on a sheltered workshop basis, was instituted in order to stimulate the child's motivation to work under time pressures. It also served to give the students some concept of how well they measured up to the demands and standards of industry.

Additional evaluations were provided, on an individual basis, for students in other areas of the Federation's training program. In instances where it was evident that a child would be homebound for purposes of work, an evaluation was conducted in the Federation's Industrial Homework Department. If a student had good eye-hand coordination and interest in fine electronics work, an evaluation was carried out in the Electronics Division. In other instances, it was necessary to secure part-time placement in competitive industry for selected youngsters in order to help them test out their ability to adjust to the adult world of work.

Students, who were potential school drop outs, were encouraged to remain on home instruction, while others were encouraged to return to the regular classroom setting.

The Implications of the Program

Some of the implications of this special project which it seems justified to state at this time are:

1. That it is imperative for at least one parent to work cooperatively with the staff in planning for their youngsters if positive, realistic vocational goals are to be reached and properly put into action
2. Based on retest findings, that exposure to a manually oriented program increases performance IQ scores on the WAIS (It is assumed that most of these

youngsters have not previously been given the opportunity to develop their perceptual-motor skills.)

3. That remedial education must be an integral part of such a program in order to prepare the students so that they may benefit from further training

4. That firmness, structure, and demands for good work, so lacking in the homebound situation must be provided in the workshop setting in order to enable these youngsters to learn to conform to the rules of the adult working world

5. That many of the students can be trained to use public transportation, thereby reducing in part their homebound status and enabling them to look forward to training and employment in a competitive work situation

6. That most of the students need vocational counseling toward more realistic vocational goals (Over a half had goals which were too high for them to reach, while one-sixth of the students were aiming for goals below their capabilities.)

7. That many of the students had problems in accepting their limitations, therefore needing special counseling in this area, while other students needed therapy in order to improve their self-image, relieve depression and anxiety, or to help them reconstruct and learn acceptable patterns of behavior

8. That this type of program serves a great need for socialization of the individual, as well as helping youngsters to learn group social techniques (Many students and parents stated that the project relieved the feeling of being isolated and that it helped in the development of better interpersonal relations.)

Summary

To date 70 students have completed this program. Of that number two have been able to return to a regular high school program; 14 have attended either junior or four year college; 13 have gone into training in a trade or business school; and 34 have been able to secure jobs in competitive employment. Three of the students who obtained jobs have not been able to maintain more than temporary employment, however. Of the total group, six have remained unemployable. The others were awaiting surgery or decided to continue high school or home instruction. Statistics, however, do not adequately tell the whole story of accomplishment with this population. For example, they do not tell the story of the cerebral palsied boy who wrote on follow-up, "For the first time, I felt I could do something.... These were the happy days of my life." Nor do they tell of the disturbed girl, withdrawn and regressed entering the project, who is now a lovely young girl looking forward to attending a business school and eventually working. They certainly do not tell of the bright young boy who read at a .5 grade level on entering the program and who is now reading at an 8th grade level, with the hope that his improvement will continue so that he can enter a two-year college next fall.

Special services and the "team approach" enable most severely disabled homebound youngsters to become contributing members of society. Planning must begin early, and parents must cooperate in order to help these children overcome the limitations of the disability. In many instances, such concentrated effort enables these children to overcome their "homeboundedness" so that they can enter the competitive, adult working world.

Jean L. Bloom, Coordinator, Special
Project for High School Homebound Students,
Federation of the Handicapped, New York
City

THE TRAINABLE MENTALLY RETARDED: SHELTERED WORKSHOPS

C. Milton Blue

Professionals in the field of mental retardation with the assistance of others, including the President of the United States, are rapidly propelling us out of an era when institutionalization was what we might call the treatment of choice for trainable mentally retarded persons into an era of home and community responsibility for these citizens, into and through their adult years. It no longer seems pertinent to ask whether we should provide facilities for such persons locally. The outstanding question becomes what service or services must be established or improved upon in order to achieve the utmost good for them in relation to their communities.

The sheltered workshop is one available and acceptable element in the long-term planning of any community. The need for sheltered workshops and other community centered facilities for retarded persons is now great and is destined to become even greater, due not only to the overcrowded conditions of the state institutions but also to the publicized emphasis on the need to retain our retarded citizens within their immediate communities whenever possible.

Since the report of the President's Panel on Mental Retardation in October of 1962 and more recently the President's Message to Congress in February of 1963, some parents who previously had considered institutionalization and in some cases had made application for their retarded child have reconsidered and are beginning to push for increased and improved local services. Care must be taken to see that this emphasis leads to qualitative improvement as well as quantitative improvement at the local level. It is not enough to embark on a crash program to establish workshop facilities. We must cautiously evaluate the results of the already established community facilities for retarded persons, including preschool classes, day school classes, and the dovetailing of these preadult services with the programs of adulthood.

Ten years ago, people of the Chattanooga area embarked on a program to assist their trainable mentally retarded citizens. It has grown into a complex of services including a day school which at present has some 130 children in ten classes, a summer residential camp serving some 84 mentally retarded persons each summer, a summer day camp, and a newly organized day care center. The foregoing were, of course, established primarily for the benefit of school age persons.

In 1957 the Occupational Training Center and Sheltered Workshop, serving mentally retarded persons of both educable and trainable intellect, was established as a demonstration project through the Office of Vocational Rehabilitation. The original purposes and goals were the generally accepted ones of evaluation, training, and where possible placement of those mentally retarded persons capable of employment within industry and service occupations; and evaluation, training, and employment of those mentally retarded persons capable of functioning with at least moderate adequacy in a closely supervised sheltered situation.

Up to this point, this history is roughly the same as that of numerous such training centers in this country. However, in the spring of 1959, prior to the termination of the federal grant, the Workshop entered into an agreement with a nation-wide sales organization whereby we agreed to be responsible for the entire manufacturing process of ball point pens and pencils. The agreement was made in order to assure the continuance of the Workshop operation after the termination of the federal grant. A big problem, therefore, was solved; at the present time we are employing 27 persons classified as educable mentally retarded and 25 trainable mentally retarded persons, and we foresee no problem in the future of lack of work for additional employees. In fact, production commitments have led to the need for increased numbers of workers, and the shop has expanded to include physically handicapped persons referred through the Division of Vocational Rehabilitation.

The expansion of the shop, plus the extreme problem of lack of trained personnel, led to a shift in emphasis from an almost totally client-centered operation to one of being production-centered. For the past three years, this one contract has accounted for the vast majority of the income of our sheltered workshop and has resulted in fiscal stability. This approach of "all the eggs in one basket" has led, however, to a number of problems, including the periodic problem of pricing and the constant threat of loss of contract due to automation.

More importantly, it has led to the aforementioned problem of the lack of attention to worker needs due to production demands. This shift in emphasis has been much more detrimental to the trainable mentally retarded persons that it has to the other two broad categories of persons served by our shop.

The Orange Grove Sheltered Workshop has known many out and out failures in its efforts to help the trainable retarded. Some of these failures are today back in our school, operating in this relatively quiet, supportive atmosphere -- in some cases at an amazingly high level. It is my purpose here to review some of the causes of these failures and the changes called for.

With only minimal attention to personal adjustment training, our educable retardates have consistently shown growth in all of the areas of work within the sheltered environment. I wish to note here that we still follow the doctrine of placement of such persons within jobs in the community whenever possible; but we find that we must accept for the present, and we hope temporarily, the hard fact that, in a community where eight percent or more of the working force is unemployed, the opportunities for placement of handicapped persons, particularly retardates, are few. In lieu then of external placement, we continue to employ many of these educable persons with attention to the need to continuously upgrade their abilities and their responsibilities.

Minimal conscious attention to personal adjustment training in the case of the trainable retardates has proved to be a different story. Improvement has been noticeably lacking, and in a few cases a decrease in the level of functioning has resulted. Perhaps the greatest deficit due to the shift has been the loss of contact with parents and, in turn, their loss of interest in the program, for without this interest an extensive personal adjustment training program would undoubtedly be valueless.

Virtually all of our Workshop clients classified as trainable mentally retarded entered that situation directly from our own school program, and in the past the transition has been instantaneous rather than gradual. In view of this, plus the geographical separateness of the two facilities, we have found it necessary, in our efforts to re-emphasize client needs, to point out to the Workshop supervisory staff that personal adjustment training is not a program they are responsible for starting but rather one that they are responsible for continuing, for the vast majority of the school activities for persons at this intellectual level are directed toward the various aspects of personal adjustment training. The supervisory staff must not view their program as being separate and apart, but rather an upward extension of the objectives (and in many cases the methods) of the school itself.

Our efforts to serve both EMR and TMR clients within one facility with a limited staff has pointed out another problem which has yielded well to staff discussions. Care must be taken by each staff member to avoid the human tendency to concentrate on the work in which gratification is most immediate and greatest. Comparatively speaking, the demands on the staff member who works with the TMR clients are extremely great while the personal gratification is small and delayed. Because of this, Workshop personnel may be tempted to relegate one aspect of an operation to the trainable retardates with an attitude that "Hooray, we've found something they can do" and then concentrate all of their efforts on the educable persons where gratification is the greatest. If we are going to accept these people, we must do more than pay lip service to their needs.

The atmosphere of the shop and the attitude of the staff should be one of ongoing experimentation. I do not mean necessarily closely controlled experimentation for publication, although we need that too, but rather an air of constant investigation and evaluation to determine how best to raise the level of functioning of each TMR subject.

We must be careful not to overlook any possibility of change which may benefit the productive and social ability of each client. Our shop, for example, had a heterogeneous group of trainable mentally retarded clients who had operated adequately and quite happily at one isolated aspect of production over a long period of time. Gradually the quality and the quantity of their work began to decrease. The problem required no deep study for it was obvious that all the workers, even the ones with the lowest intellect, were overcome by boredom.

By raising the difficulty level of the task through: (a) inserting the need for color discrimination, and (b) increasing the number of operations necessary, we improved the response of the workers. The immediate level of production was not raised appreciably, but we definitely raised the level of satisfaction which the employees themselves felt. It is reasonable to expect an improvement in production if this simple type of motivation is maintained over an extended period of time.

The foregoing issues are examples of problems which, through study, are recognizable and manageable over a short period of time. Unfortunately the paramount problem which forms the basis for these and attendant problems is not so easily surmounted. It has taken us many years to reduce the aura of hopelessness which formerly surrounded the term retarded. It has been reduced and now even the general public is beginning to show a grasp of the fact that the term retardation is relative and that there are various levels.

Unfortunately the aura of hopelessness still exists, even in the minds of some professional people, below that line of demarcation where educability is assumed to end, IQ 50 to 55. Assumptions and unfounded generalizations are quite common in regard to those persons who fall within the IQ limits of 25 to 50, in spite of the fact that variability is probably greater in this range than in any other when all aspects of growth and behavior are considered.

If we are to make progress in the development of any programs for these people, we must eliminate these dangerous assumptions from the minds of parents, physicians, educators, workshop personnel; yes, even psychologists.

It is our feeling that many of the failures in our shop were set up when the persons in question were very young children. At that time, each parent was in contact with a professional person who undoubtedly felt that his prime responsibility was one of getting the parent to adopt a "realistic attitude."

Generally speaking, the term "realistic" has been stressed by the conscientious professional worker until it has become, for the parent, synonomous with sheer pessimism and hopelessness. This outlook has been 100 percent true in the case of the general public. It has meant to the parents that throughout their child's life he could be expected to be childlike -- emotionally, socially, and spiritually, as well as intellectually. Most parents had difficulty absorbing the idea of mental retardation at all; but after hearing the diagnosis repeatedly and comparing their child's intellectual growth with that of other children, they finally came around to accepting the hopelessness of the situation. It is no problem for any person who has worked with adult retardates to conjure up the picture of a mother sitting by her 21 year old mentally retarded, 200 pound son, as he asks if it's allright for him to smoke; and she says, "I surely hope that you can help me with my child." To her, he is a five-year old child in a 21 year old body. Is it any wonder that this young man exhibits the actions, the reactions, and the attitudes of an infant?

For example, the child-like need and drive in young adult retardates for attention and constant approval is in many cases puzzlingly distant from the individual's mental age and obvious work potential, and can only be attributed to the factors which influenced the growth, or lack of growth, of the person's self-concept. This is, to a large extent, an externally imposed factor which operates to limit the functioning of the TMR in any adult work activity.

In following this line of reasoning we find that we must not delay the actual preparation for work until the generally accepted age of employability, 16 years or older. We must begin at an extremely early age by preparing the parents for the possibility of work placement in the distant future. The need for caution is, of course, essential for we do not want to bend the term "realistic" to the other extreme where we will be developing false hopes.

We must evaluate the labels which we use and discard or change those to which incorrect meanings have been attached. For example, the terms severely mentally retarded and trainable mentally retarded are frequently used as being interchangeable. Ideally, the term trainable should be reserved for those retardates not judged to be educable for whom there is a real basis for predicting that some work placement will be possible in the future. Along with this, we must eradicate from the minds of professional workers the idea that those persons bearing the label "trainable" in the school years are hopeless and that our only responsibility is to keep them happy. Even with this change, we must constantly remind ourselves that labels may have a real operational utility for educational purposes but that for work purposes the labels may be extremely misleading. Experience has taught us that many school age EMRs function as adequate dull normal individuals in adulthood. We must further recognize that many children judged trainable have the potential to function as educable adult employees.

In line with the foregoing, persons working in the habilitation of retarded adults, must publicize the fact that there are jobs available, we hope in increasing quantities, which are fully within the capabilities of trainable retarded adults. Physicians, teachers, social workers, and psychologists should be shown what can be accomplished with such persons if they are not relegated to a life of hopelessness at an early age.

Through adequate parent counseling, we can help parents to view workshop placement as not only an acceptable but a desirable goal toward which we should constantly work as the child develops to adulthood. At some point in the life of each of these persons for whom workshop placement is predicted, real work-hardening experiences should be introduced gradually.

In the past, a judgment was made in the Orange Grove School by the Director and the teachers involved at the end of each year as to which of the young trainable mentally retarded adults were ready to go to the sheltered workshop. Thus, in May the school experience ended and in September real work experience began with no transition. We have felt that the experiences previously gained in the school through craft activities, desk work, classroom cleaning, etc. did not generalize as expected to productive activity.

The President's Panel has noted, primarily in regard to the educable mentally retarded, that vocational preparation must be a specific program starting prior to the age of employability. This is also of great importance in the case of trainable mentally retarded persons. We now deem it necessary to begin those persons in work-hardening situations at least a year, and in some cases more, prior to the time we expect them to go from the school into the shop.

One such group was started last fall, and at present they are learning all aspects of the assembly of ball point pens and pencils plus other types of contract work, within the school itself but apart from the classroom. The environment is, in effect, an artificial production setup in which we are able to gradually build up tolerance for the noises, the motion, and to some extent, the physical demands of the Workshop to the point where they will graduate to brief periods of work in the shop itself after they have achieved the age of 16. Gradually the time within the shop will be extended until they are capable of working a full day.

The potential of community work programs for persons of trainable intellect is presently unknown. As with any new program which was previously considered impossible, there is presently a multitude of questions with a minimum of answers. Our experience has taught us one valuable lesson: it is possible to develop some trainable persons into adequately functioning workshop employees, but it is not possible to train them to this level in a hurry. We must not let the slowness of the process disturb us.

We should, of course, strive to do the best we can with the trainable persons who are presently young adults, but the attitudes developed within these people over the period of 16 years or more reduces the chance for real success. Therefore, our thinking and planning for the future should key on those young children, presently considered trainable, who apparently have the potential for work placement in years hence.

C. Milton Blue, Executive Director, Orange
Grove School for Retarded Children, Inc.,
Chattanooga, Tennessee

THE SCHOOL'S RESPONSIBILITIES AND RESOURCES FOR THE NEUROLOGICALLY IMPAIRED

George C. Boone

With the limited time available at this session, it would be unwise to review in any detail the history of public school responsibility for services to handicapped children. I would point out, however, that many services originally of the "residential institution" type were strictly limited to the institution and were not provided by local boards of education. We gradually witnessed the "taking on" of responsibility for the education of handicapped children in the community, starting in the late 1800's.

Some of the first programs were for the mentally handicapped and health classes. By 1911, programs for the mentally retarded were to be found in about 200 cities. Provisions for local educational programs for other handicapping conditions appeared later. Some of these were for the cerebral palsied, orthopedically handicapped, the blind, the deaf, and more recently services for children with serious social-emotional problems, the trainable retarded, the multiple handicapped, the culturally deprived, and a group now characterized by terms such as neurologically impaired, brain damaged, brain injured, children with central nervous system disorders, communication dysfunctions ---- We could add to this list the autistic, the aphasic.

Parent groups have had a strong influence upon the acceptance of educational programs for the handicapped child by state legislators and local boards of education. The parent group representative of the children we are discussing has played a very important role in having brain injured children accepted as a responsibility of the public schools. These groups, as well as state offices of special education and mental health clinics, agencies and associations -- local, county, state and national -- have opened classroom doors to these children.

Faced with the complex behavior and learning characteristics of the brain injured child, parents are usually well informed; and because they can show that many of these youngsters have ability and that hyperactivity can be controlled and that special methods of classroom procedure are effective and that this is a public school responsibility, growth of service has been rapid and interest is keen. In the state from which I come, 26 classes in 3 years have been started.

These neurologically impaired children present problems that differ from children with other exceptional characteristics. We have heard them described at meetings of this conference. Many have multiple handicaps; some are difficult to classify and distinguish. They may or may not have emotional conflicts; they frequently have difficulty relating to others. Is the child aphasic? Is he emotionally disturbed? Does he live in fear? Is he rejected? On and on we could go with our uncertainties and our concerns.

We have witnessed a decided change in the attitude of the public and those in educational circles toward acceptance of responsibility for these children in public school programs. Many are children with good potential.

Many educators, and I quote from the preface to A Teaching Method for Brain Injured Children (Cruickshank et al., 1961), "are seriously attempting to meet the needs of a group of children each member of which presents extra-ordinarily complex demands on the school."

All resources of the school will be needed to help these children reach success commensurate with learning that is typical of their chronological age and mental ability. This includes a variety of professional services as well as physical surroundings and materials and equipment suited to overcoming the child's inability to achieve.

An individualized plan is essential and should be adjusted to the needs as best determinded by physical and psychological screening. The needs of these children cannot be met unless teaching methods are adjusted to cause of the disability and effect of the teaching process.

In a speech, Simches (1962) had this to say in regard to education of neurologically impaired: "----growth is evident when one examines the extensive programs initiated for the mentally retarded and the various diagnostic categories under the comprehensive heading of physically handicapped. Despite this rapid growth in programs, two groups have been by-passed: brain injured and emotionally disturbed. Brain injury, as a diagnostic category, still has not received full acceptance." Simches raises some questions with regard to public school programs. He raises the question as to adequacy and type of diagnosis that will distinguish the neurologically impaired from the mentally ill, the emotionally disturbed, the aphasic, the seriously mentally retarded. What should the content of the program be? What kinds of programs would benefit these children? Is the program to be "treatment oriented" or "educationally oriented?" Should the program be housed in a regular public school building? These are much the same types of questions raised when programs were iniated for trainable level retarded children when accepted as a responsibility of a local board of education.

Again, to quote from the speech of Simches (1962): "Before a school or community can provide a positive program, there are certain minimum factors that must exist in the community. One factor is concerned with attitude. There must be attitude to want to do something about the problem. An attitude on the part of the community and the school as well as private and public agencies to want to explore, to experiment and to even face irritation or failure as they go about attempting to build, to create, to explore frontiers of services that may be unknown, to go into unchartered waters, if you will."

There is no point in attempting the establishment of educational services for neurologically impaired unless adequate resources are available. Inadequate or wholly unavailable diagnostic services and facilities will in all probability worsen rather than improve any program in this area of the handicapped. Teacher preparation and availability has retarded the growth of programming.

What would we consider an adequate resource for diagnosis? In this area of the handicapped, physical origins may differ and we must rely on specialized medical service not always available in local districts and especially in sparsely settled areas. We rely on a team approach in diagnosis, an approach involving competent medical, neurological, psychological, physiological, educational, and sociological judgments.

Appropriate educational services can be provided only after a pooling of all we know about the individual, and only then. We heard this emphasized by representatives of medicine and psychology yesterday morning. Adequate resources depend upon needs determined by individual diagnosis. Services may be provided (a) in regular classes with a supplementary program, (b) in small groups with flexible programming and time scheduling, (c) in special classes allowing for mobility in order to share with normal children whenever possible, (d) in individual instruction at home or at school for those who are not yet ready for a group experience.

Individual instruction at home should not take the place of group instruction if at all possible since isolating the individual in an environment that might have been causative, i.e. in relation to adjustment to others, would be very questionable.

We recognize that certain behavior disorders cannot be resolved in public school settings, but exclusion is not an answer to the problem of a neurologically impaired child whose major handicapping condition may be a language disability, a communication disorder, or inability to recognize self in relation to others.

We recognize that "brain damage" is a physical disability and as such is included in services mandated for children with a physical disability, even though multiple handicapping conditions require the professional services of those persons in areas of psychology, psychiatry, neurology, and social work. The public schools under authority vested in them are usually not agencies for treatment or therapy. We recognize, however, that the educational program of the school plays an important part in any program of treatment. A close relationship needs to exist between the school and the treatment agencies if the problem is to be resolved effectively.

In a recent attempt to give direction for responsibility, our Office of Special Education suggests the schools have a responsibility for developing pupil potential with the neurologically impaired. This cannot be accomplished with a neurologically impaired pupil unless we know about his unique handicapping condition and unless we know something about how to approach him in a learning situation that meets his unique way of learning or his inability to learn.

Schools have the following responsibilities:

1. To make use of professional services within and outside the framework of the schools
2. To identify early and through careful diagnosis neurologically impaired children, using all of the techniques and know-how that are available to them
3. To provide a comprehensive physical examination including a neurological examination whenever indicated
4. To include professional services in areas of psychology, psychiatry, social work; to include school nurse service and remediation in the overall educational program
5. To make use, through cooperative activity, of all local, county, and state services that could contribute to resolving the problems of the neurologically impaired
6. To orient and re-orient school administrators, superintendents, principals, and teachers
7. To be concerned with a parent education program
8. To adjust curriculum to the specific needs of these children in light of types and kinds of learning difficulties -- make it flexible in time and content but structured to give security and stability

9. To make use of resources of agencies, clinics, pediatricians, family physicians, school health services, parent groups and to plan cooperative activity in resolving the problem
10. To recognize that the term neurologically impaired relates to a variety of conditions due to a variety of causes and having many different manifestations
11. To provide a special education setting, specialized techniques, and intensive rehabilitation in an attempt to make it possible for the child to function adequately in a regular class.

Dr. Sam Kirk (1963) said last evening that "the most important ingredient is the classroom teacher." The teachers of these classes should have at least three years of successful teaching experience in a classroom with children of approximate age level of those to whom they will be assigned. They should have at least 90 clock hours of supervised clinic practicum in learning disabilities of children. They should have at least some course studies in areas of the exceptional child and psychology. It is recommended: (a) that whenever possible more than one class be located in a building or center; (b) that all classes be located in regular elementary or secondary schools to facilitate the integration in regular programs; (c) that the classroom be of adequate size with equipment to fit the unique and specific needs of the group; (d) that there be no more than eight pupils in the class; (e) that there be no more than a three year spread in the ages of the children; (f) that teachers meet state certification requirements; (g) that the curriculum be based on individual needs and take into account the specific learning disability; (h) that special materials needed for remediation be provided; and (i) that classes be supervised by people knowledgeable in the field who can assist teachers with curriculum and other aspects of the program associated with the learning problem.

The public schools have a responsibility to make living good and meaningful for all children of school age who can be contained in a public school setting. They have a responsibility to provide adequate service to bring this about for the neurologically impaired child to the extent that research gives direction and to the extent that experimentation through pilot studies can be initiated by a local school district.

This is an exciting period of rapid growth in educating neurologically impaired children. Let us procede with caution but with courage. Encourage local boards to participate in this growing-edge activity. Encourage them to provide opportunities to save these children who for so long "nobody knew what to do with."

References

Cruickshank, W. M., Bentzen, Frances H., Ratzeburg, F. H., and Tannhauser, Mirian T. A teaching method for brain-injured and hyperactive children. Syracuse: Syracuse University Press, 1961.

Kirk, S. A. Rearranging our prejudices. Paper read at International Convention, The Council for Exceptional Children, Philadelphia, April 18, 1963.

Simches, R. F. Some table-side thoughts on the education of emotionally disturbed children. Paper read at National Association of State Directors of Special Education, May 18, 1962.

George C. Boone, Director, Education of
the Handicapped, State Department of Education, Trenton, New Jersey.

IDENTIFICATION OF THE GIFTED: MANDATES

Waitus R. Burris

The term giftedness has been used so loosely that it has very little meaning without an accompanying definition. Its usage has varied from a designation of the top one-tenth of one percent of the juvenile population, as measured by individual psychological tests, to those whose "performance in a potentially valuable line of human activity is consistently remarkable."

The concept of giftedness has a definite effect on the methods of identification of gifted children and youth for their educational programs. A common practice seems to be to classify each grade into an administratively feasible number of groups with the top five, ten or twenty percent (depending upon the number of sections) designated as the class for the gifted. In identifying the pupils for this section, the usual procedure is to select several criteria such as (a) a certain percentile on group intelligence tests, (b) a minimum grade on the past year's school work, (c) a certain percentile on standardized achievement tests, (d) a minimum rating on a reading test, and (e) teacher judgment. There is often a requirement that the pupil receive positive scores on any four of these five criteria. This view might be considered the relative concept of giftedness. Although the pupils in this type of program would likely enjoy a more adequate educational experience than they would have in a completely heterogeneous population, it is not a program for the gifted. As an extreme example, a grade or class of pupils of lower than usual intelligence could have in its top level section those with just average ability. Conversely, with a group of unusually high ability level pupils, some who are usually considered of exceptionally high intelligence might be excluded. This approach also eliminates the underachiever who is in as great need of the program as his achieving peers.

A comparable practice is to adhere strictly to an IQ minimum which may vary from as low as 120 to 170 or 180 on Binet tests. This practice is based on the philosophy that giftedness is a condition of very high intelligence and that, unless the mental processes are on a level high enough to require special teaching techniques and content, the pupil should be taught as a normal child. Although this concept of giftedness may be considered sound, the practice eliminates the very capable youngster who excels in his work but for some reason does not do comparatively well on tests.

Occasionally, the program is thrown open to all pupils who wish to try it with only the persevering ones "enduring unto the end." This tends to defeat the very purpose of the program, as many overly-motivated pupils will struggle along and keep the work on a low level of efficiency.

As there seems to be no universally accepted concept or philosophy of education for the gifted, there is no standard definition of giftedness. But methods of identification must be based on a reasonable, practical, and sound definition of the term giftedness. Although no attempt is here made to formulate such a definition, it seems obvious that for purposes of education the gifted child would be one whose intelligence, ability, talents and/or potential are of such a high quality or degree that a program of instruction appreciably different from that appropriate for less able pupils is necessary for an adequate development of his intellectual, social, emotional, cultural, and professional life. As there are many generally accepted characteristics of gifted children, identification becomes merely the application of any and all means of discovering or recognizing these characteristics.

Any method of identification must be selective enough to include only those whose abilities or potentials would place them in the classification of giftedness but flexible enough not to exclude any who should be admitted. All pupils who score above the designated minimum IQ limits should be considered eligible for the program, even though placement may depend upon other factors such as social and emotional maturity, physical and mental health, etc. Eligibility, however, should not be limited to IQ scores, but a record of outstanding performance and demonstrated ability should be accepted as evidence of giftedness.

The selection process should allow movement into and from the program as the need indicates. Actual performance, once an opportunity is given, is the only sure criterion.

Identification, screening, and placement should be done by a "team" of competent persons who can render objective decisions. No one person should be charged with the responsibility of making such an important and consequential decision.

The question of how to identify the gifted should not overshadow that of when to identify. The earlier a child can be recognized as having unusual traits, the greater the possibilities of helping him to develop them and of preventing the tragedy of wasted talents.

Waitus R. Burris, Supervisor of Special Education, State Deparment of Education, Jackson, Mississippi.

THE DYSLEXIC PATTERN OF ONE CASE DIAGNOSED AS HAVING NEUROPHYSIOLOGICAL DYSFUNCTION

Gabrielle Casebier

With the publication of the controversial Why Johnny Can't Read, after-dinner conversation became punctuated with pros and cons relative to its content. This publication is apropos as approximately one in ten school-age children has difficulty learning to read. ---- While percentages are not known, the number of children with neurophysiological dysfunction who are substandard readers (dyslexia) or perhaps nonreaders (alexia) is impressive. Strauss and Lehtinen (1947) say that "Failure or partial failure to master the reading process is an experience shared by large numbers of brain damaged children."

It is the purpose of this paper to report the dyslexic pattern of a ten year old boy diagnosed as having neurophysiological dysfunction. This dysfunction is characterized by two of the three main types of the impositions of learning: (1) those resulting from emotional disturbances and (2) those derived from deficits in the central nervous system. This study seems justified because it is only from specific knowledge of the dyslexic process of this type of disorder that remediation can be effected in order to correct excessive errors and/or improve psychological processes.

Data for the paper were obtained from both objective and subjective measures. Objective measures were limited to the following tests: The Illinois Test of Psycholinguistic Abilities and the subtests of the Gates Reading Tests. Verbal and performance ability as measured by psychological tests were also a part of the standard measure. Subjective information was supplied by the clinic school teacher, a psychiatrist, and a speech pathologist.

A developmental description of the past and/or present learning disabilities may facilitate an understanding of the presenting problem, since behavior is said to follow the capacity of the organism and, as Strauss and Kephart (1955) point out, "When we deal with brain injury we are dealing with the aftermath of an accident to the organism. We need to consider not only the organism itself but the developmental process which is taking place."

This developmental description begins at two years of age when excessive temper tantrums were noted. Such behavior became very severe between the ages of two and three, and by four years of age parents were aware that major difficulties existed.

At four years nine months, a psychological examination was administered. The child, to whom we shall refer as Tom, was found to have a full scale IQ of 80 as measured by the Binet and a social age of four years three months as measured by the Social Maturity Scale.

Tom began his school career in August of 1957, at approximately four years six months. He was enrolled in a nursery school where he remained only six weeks. Work there was terminated because of "running away from the group." During this same year, he was enrolled in a second nursery school and a private day camp, with no success at either. In the fall of 1958, at about five years six months, an attempt was made at public school kindergarten, but the work was too difficult. At the beginning of the following school year, at six years six months, he was enrolled in a private kindergarten. It was found that attention span was short and school work generally too difficult and frustrating. By this time it was apparent that subject could not function in a normal school setting. In summary, eight different day camps and schools were unsuccessfully attempted within a three year period.

An evaluation at the Child Guidance Clinic in March, 1961 included a psychiatric evaluation, psychological testing, and a speech and language evaluation. The medical diagnosis was that of neurophysiological dysfunction. On the Wechsler Intelligence Scale, the verbal scale score was 91, performance 53, and full scale score 70. Speech was characterized by substitution, omission, and distortion of sounds. There was stuttering on approximately five percent of the words. Hearing was within the normal range. Specific learning disabilities were revealed by the Illinois Test of Psycholinguistic Abilities.

As has been previously mentioned, this paper is limited to diagnostic results of four objective tests: The Illinois Test of Psycholinguistic Abilities, the subtests of the Gates Reading Test, and verbal and performance ability as measured by psychological tests. Subjective observations by persons who worked with the subject have also been considered.

Tom entered the clinic school in September, 1961. He was at that time classified as a nonreader. The reading process is here considered to be one of communication, that is, the development of a system of informational input, integration, and output. The Illinois Test of Psycholinguistic Abilities was administered because it tests this system. The above concept of neural function is described by Wepman et al. (1960): "--- the central nervous system is seen as possessing a three-part organization of specific modality bound input, leading to a central integrative function which is not modality bound, and then to specific output modalities for expression."

The subject's psycholinguistic profile can only be compared against itself since no research has been done with poor readers so diagnosed. However, for test interpretation, it is helpful to draw analogy with performances on the ITPA with two groups: poor readers who have normal IQs and normal readers with normal IQs. Norms used for poor readers who have normal IQs are not standardized norms but those suggested in a dissertation by Kass (1962). In modality input or receptive abilities of visual decoding (the ability to understand what is seen), there was a significant deficit in our subject. This deficit indicates that there is a deficiency in the ability to take in information through the visual channel. Results differ from those for children with normal IQs and classified as poor readers, who were found to be superior in visual decoding when compared with normal children. The rationale for this superior performance in visual decoding is that children with normal intelligence, who have difficulty handling the symbols in reading, compensate by getting information from pictures. They seem to require the concrete, meaningful whole in order to "get the picture." The subject under discussion apparently does not make this compensation. In the modality input of auditory decoding (the ability to understand what is heard), test results indicated that Tom was functioning near chronological age. This part of the profile is comparable to both of the above mentioned groups -- poor readers and normal, both groups with normal IQ. In summary of modality input, both visually and auditorily, subjective reports of functioning in the classroom indicated that generally the subject had difficulty in both looking and concentrating, which might account for reduced performance in visual intake. There was some ability to associate word forms with pronunciation but reduced ability to attach meaning to the written word. There were concepts to associate with but few words which expressed an abstract idea or ideas.

In the areas of visual-motor association (the ability to draw relationships from what is seen) at the representational level, he scored at seven years ten months. Chronological age was eight years seven months at this time. He is similar to children with reading disabilities and to normal readers, both groups having normal IQ, in this ability. In the area of auditory-vocal association (the ability to draw relationships from what is heard) at the representational level, there was a significant deficit in our subject. This deficit is like that of poor readers with normal IQ and lower than subtest scores for normal readers. The auditory pattern for encoding and association when looked at together is seen to be bizarre. Though ability to comprehend auditory stimulus was near normal, ability to integrate auditory concepts was reduced. In addition, studies of intelligence (Gallagher and Lucito, 1961) have indicated that the factor which appears to differentiate giftedness from low intelligence is conceptualization ability. As has been pointed out, subject had a full scale IQ of 70 at the time of this testing. Reduced ability to conceptualize auditorily might account in part for the lowered IQ score.

Tom was found to have severe deficits in modality output or expression: vocal encoding (the ability to express ideas verbally) and motor encoding (the ability to express ideas manually). Subjects with reading disabilities and normal IQ were found to be like normals in these two areas. Reduced ability to formulate verbal symbols for expression and to gesture effectively has been a consistently limiting factor in this case. Much of this reduced ability for verbal expression may be caused by autistic tendencies, and reduced ability in the execution of gesture may be caused in part by a poorly developed body image. The lowest of any score was made in the latter area. According to Kephart (1960), inability to function in this area is caused in part by a poorly developed body image and motor pattern. There was ability to identify various parts of the body but only a vague awareness of the relationship of the parts. While in the classroom, he drew a picture of a boy, placing the head on the neck, a leg at the top of the sheet of paper, and an arm at the bottom. There was no connection between these parts. The deprivation of expressive language when gesture is absent can only be realized when it is noted that there are complete gesture languages presently used in various parts of the world, where for some reason vocal speech is either not desirable or impossible.

At the automatic sequential level, the score was near chronological age on the auditory-vocal automatic subtest (the ability to use the structure of language automatically). Inaccuracy of production or delay in the acquisition of the phonemics and phonetic pattern is most often not the problem in children with this type of language pattern. Performance in auditory-vocal sequencing (the ability to reproduce a series of symbols presented auditorily) was high. This would have been anticipated because subject has shown an uncanny ability from the beginning to repeat lists of numbers, nonsense syllables, etc., from rote memory. On the above two subtests, there was a similarity to children with reading disabilities and to normals, both groups with the normal IQ. There was a significant deficit in visual-motor sequencing (the ability to reproduce a series of symbols presented visually). This score is comparable to the poor readers group with the normal IQ. Research on certain processes involved in the acquisition of reading skills seems to indicate the necessity for adequate auditory and visual integration. More specifically, recent research (Kass, 1962) suggests that there is a high correlation between low scores on visual-motor sequencing and poor reading ability. Subject's reading performance was then further complicated by this deficit. The clinic teacher's report suggested that functioning in the reading process was characterized by an inability to integrate elements into meaningful wholes. The report suggested further that there was no reliance on conceptual clues. Words remained words rather than parts of a sentence, clause, or phrase to create meaning.

Nine months later, after remediation in all areas of deficit, there was a re-evaluation of the psycholinguistic process only. Two significant changes had taken place. There was now a significant deficit in visual-motor association (ability to conceptualize or to draw relationships from what is seen). It would not have been anticipated that visual-motor association abilities would regress. It was therefore concluded that remediation should be done not only in the areas of deficit but in all areas when working with this type of child. Auditory-vocal association (ability to conceptualize or to draw relationships from what is heard) was not now significantly low but remained approximately two years below chronological age. Remediation had been done in auditory-vocal association. The school report at this time indicated that the subject's word understanding was below par. If the word were varied in its meaning, there was no ability to grasp it quickly. There was no ability to comprehend a story, or even everyday action, in the present tense, and anything which suggested a future reference was impossible. It was not possible for subject to sequence events in stories, and there appeared to be difficulty in sequencing events in his own life.

Tom is presently ten years of age. There are no norms on the subtests of the ITPA for this age. Various subtests of the Gates Reading were administered in order to determine the present grade level of functioning in reading.

Gates Reading Diagnostic Tests, Form I, 1942

Administered March 8, 1963

	Grading Score	Reading Ages
Oral Reading	3.2	8 years 8 months
Oral Vocabulary	2.6	No norms

According to results of these tests, oral reading is probably functioning at present between the beginning second and fourth grade levels. An informal appraisal of comprehension of what had been read orally was made from responses to questions on content. Results would indicate recall and interpretation of some concrete words and phrases which were significant to the subject but no recall of other details, even though they were concrete and of equal importance. Some sentences with concrete words were perceived and remembered, but paragraphs even though partially perceived were not remembered and interpreted. No inferred meanings were perceived when concepts were abstract. Summarizing, evaluating, drawing conclusions, and generalizing from reading were skills beyond the subject's ability. Therefore, test results seemed to reflect ability to associate pronunciations with word forms and to associate concrete concepts with words and sentences.

References

Bangs, Tina E. Evaluating children with language delay. J. Sp. and Hear. Dis., 1961, 26, 6-18.

Gallagher, I. J., and Lucito, L. J. Intellectual pattern of gifted compared with average and retarded. Except. Child., 1961, 28, 479-482.

Jersild, A. T. Child Psychology. Englewood Cliffs, New Jersey: Prentice Hall, 1954.

Johnson, Wendell, Darley, F. L., and Spriestersbach, D. C. Diagnostic methods in speech pathology. New York: Harper and Row, 1963.

Kass, Corrine. Some psychological correlates of severe reading disabilities (dyslexia). Unpublished doctoral dissertation, University of Illinois, 1962.

Kephart, N. C. The slow learner in the classroom. Columbus: Charles E. Merril, 1960.

Kowalsky, Marjorie H. Integration of a severely hard of hearing child in a normal first-grade program: a case study. J. Sp. and Hear. Dis., 1962, 27, 349-358.

L'Abate, Luciano. Consensus of choice among children: a test of Piaget's theory of cognitive development. Reprint J. genet. Psychol., 1962, 100, 143-149.

Strauss, A. A., and Lehtinen, L. E. Psychopathology and education of the brain injured child. New York: Grunne and Stratton, 1, 1947.

Strauss, A. A., and Kephart, N. C. Psychopathology and education of the brain injured child. New York: Grunne and Stratton, 2, 1955.

Wepman, J. M., Jones, L. V., Bock, R. D., and Van Pelt, Doris. Studies in aphasia: background and theoretical formulations. J. Sp. and Hear. Dis., 1960, 25, 225-234.

Gabrielle Casebier, Speech Pathology Instructor, Division of Child Psychiatry, School of Medicine, Washington University, St. Louis, Missouri

LOGICAL AND LINGUISTIC OPERATIONS

Joseph Church

Most of us take for granted that linguistic development is closely implicated in intellectual development. We use all manner of verbal and symbolic devices to assess intelligence: vocabulary tests, similarities tests, arithmetic tests, antonyms tests, proverb tests, absurdities tests, and so on. Similarly, education, presumably designed to enhance intellectual functioning, is largely an exchange of symbols. Even when we use concrete materials or pictures, it is with the aim of giving substance to symbolic formulations. When we teach a subject matter, our teaching is only partly a pointing to a phenomenal segment of the real world and is to a great extent a teaching of the special vocabulary used to talk about the special subject matter. The special vocabulary of a field includes names for phenomena and also for concepts and principles by which we order and organize and bring together discrete and sometimes disparate phenomena into a manageable system.

All the instruments used to test symbolic proficiency reveal differences of functioning associated with age differences. Sometimes these are differences of more or less, as when we score vocabulary-test performance for number of words known. Sometimes they are qualitative differences, as in style of word definition. Sometimes they are all-or-none differences, as between being incapable of giving antonyms and being able to.

Now all these instruments work reasonably well in assessing intellectual status. They all have conceptual, technical, and predictive inadequacies, but for most purposes these do not matter. These instruments have one characteristic which, paradoxically, makes them simultaneously interesting and uninteresting to the student of normal human development. This characteristic is that they are artificial, they do not correspond to what goes on in the everyday mental activity of most children. This artificiality is interesting because it provides a demonstration -- unfortunately a demonstration that leaves the antecedent variables uncontrolled -- of learning set or rapid learning. That is, most children, when given an intelligence test, are being asked to perform intellectual operations which they have never performed before, but which they have somehow, by virtue of previous experience, become able to perform. They are uninteresting, however, because they tell us nothing about the nature of the antecedent learning or about the extra-experimental operations of which the child may be capable or with which the formal tasks may be correlated. We do know that proficiency on intelligence-test tasks is correlated grossly with academic performance, but we do not know what it is in the child that enables him to do these two somewhat different kinds of things. Now one can name this "something-in-the-child" "intelligence," and, having done so, one can then correlate intelligence with various organic variables, including skin color, with social class, parental education, family finances, place of residence, or whatever, and come out with some provocative statistical relationships. What one will not have, though, is any increased understanding of the normal processes of intellectual development or of the particular, concrete environmental correlates of various patterns of intellectual development.

What I am working up to is the fairly radical proposal that we start all over again. This does not mean scrapping everything we have learned but appreciating how little it has taught us and looking for new ways of conceptualizing our object of study. Our study of linguistic development, for instance, has been impaired by inadequate categories for the description of linguistic acts. The kind of analysis that I want to propose falls somewhere in between the old-fashioned grammatical analysis -- use of various parts of speech, compound and complex sentences, flexions, and so forth -- and Piaget's to me exciting but premature analysis in terms of operations of symbolic logic. Like most modern developmental psychologists, I must acknowledge my profound debt to Piaget but without committing myself to any of his formulations. While I am publishing disclaimers, let me say that I am proposing a return to naturalistic observational methods, not in repudiation of the experimental method or the quasi-experimental method of the standardized test, but as a way of finding out what experiments are worth while. A final disclaimer: I am not going to propose a system of operations for study. In the first place, time would not allow. In the second place, I do not have such a system. What I have are some half-formulated ideas which I would like to share with you and which I hope you yourselves will feel inclined to think about, and perhaps to use.

Let me try to make clear to you, in hopes that it will become clear to me, what it is that I am in search of. I think a crude distinction can be drawn between speech acts which aim to produce an immediate concrete result, as in imperative statements, and those which have as their consequence a verbal reply. Now when we are talking about the language of young children, the person who speaks may be the same as the person who replies. However, this holds true of advanced dialectical thinking as well and need not be a problem. Speech-stimulating speech has as a characteristic that it is constructive (for lack of a better word), that is, it pieces together out of verbal materials a representation of a real or hypothetical state of affairs, a "virtual" reality. Action-oriented statements may also require an act of symbolic representation, but such representation is subordinate to the main business of getting something done. Now it is characteristic of verbal constructions that they are incomplete: they give prominence to some parts of situations and play down or omit others. I would define linguistic operations as the devices by which we represent reality or construct a virtual reality. Some of these devices take standard linguistic form; others have to be composed ad hoc.

What I am interested in is the development of linguistic operations in the child. This is a matter not only of his acquiring the standard linguistic forms but of his anticipating them with inventions of his own. I pose as a principle that children live beyond their linguistic means. They say words which they can't pronounce; they compose sentences before they know the rules of grammar and syntax; if they lack a word they stretch another to take its place; they perform intellectual operations for which they lack the standard forms. What this general assertion implies for theories about the relationship of language to thinking I am not sure, but I think there is no denying the phenomenon. There should be no need to document the fact of babyish pronunciation or that it deters the baby not at all in his talking. The toddler's reference to airplanes as "ahmah" does not confuse his parents in the least, even though he refers to his grandmother in exactly the same way. We know that the baby makes up sentences without benefit of prepositions, articles, conjunctions, pronouns, or flexions of tense and number, with little regard to standard word order, and still manages to make himself understood. If the child lacks a word, he substitutes another. I have given elsewhere as an example of semantic extension the various uses to which the word "heavy" can be put: "too high to reach," "steep," "strong," plus, of course, its regular meaning. Notice that these are probably not metaphorical uses; it is much more likely that for the young child "heavy" is simply a word that means "entailing strain and effort." As a matter of fact, quite a few children use "strong" to cover exactly the same semantic terrain. An invented interrogatory form is the prefixing of a declarative sentence with an interrogatory form, as in "Is she is in the kitchen?" and "May I may have some?" Long before he can give antonyms on demand, the child uses antonyms to draw contrasts. Here is an especially fertile field for invention: "slowpoke" and "fastpoke," "upper" and "downer," "nobody" and "lotsofbodies." A not quite three-year-old referred to the main gate of Vassar College, which is an arch with a uniformed guard in attendance, as a "driveway with a mailman inside." This same child, at about the same time, asked, "Does a jet plane have a spinning?" And just as the child finds words or phrases to fill gaps in his vocabulary, so he finds phrasings for operations. A not quite four-year-old boy noticed a Jules Feiffer cartoon, consisting, as many of them do, of a series of profiles with adjacent text. He asked, "What does this say?" and, before the adult could answer, gave his own reply, "It says: 'If there aren't any heads, make them as good as you can.'" If we had time to let you puzzle over this a moment, you would see what this child was saying. Since we haven't, let me explain that he was saying two things: first, that this is a task of some sort, analogous to the tasks in the exercise books that my sister brings home from school; second, that the task is to complete the drawings. This he then went ahead and did, filling in the backs of the heads and the ears.

With this much background, it is time that I became systematic. Unfortunately, any real system will have to await empirical observations. I can only offer examples of what I think are possible categories of speech acts. Here I must acknowledge my indebtedness to Uriel Weinreich's superb paper, "On semantic universals."

Most children's first spontaneous speech is an act of denomination, of pointing and naming. Very early in his linguistic career, the child speaks imperatively. To the best of my knowledge, however, no one has yet recorded when the child begins to use first-person plural ("Let us be on our way") and third-person imperatives ("Let him make haste," "May he never darken my door again"). A great leap forward comes with the first act of predication, posing a sentence subject and attaching an attribute word or phrase, as in "car, backing up."

There is a whole group of operations under the general heading of deixis, by which a topic of discourse is located with reference to speaker, listener, and other topics in space, time, and various attitudinal and valuative dimensions, including skepticism, uncertainty, and emphatic assertion as in "He does so" and "I am so." We do not even know at what point the child first shrugs his shoulders as an indication of ignorance. In speaking of uncertainty, I am reminded of a common construction in the papers of college students, who have been taught scientific caution and the danger of making sweeping generalizations: "According to Freud, the Oedipus complex takes place late in the preschool years, to a certain extent." It is fascinating to consider the partially overlapping vocabularies of space and time in English. Time is represented by tenses, indicated either by verb endings or auxiliaries -- notice such complex formations as future in the past ("He had been going to do it") -- by connectives (before, after, during, throughout, while, when, thereafter, whenever), by causal verbs which imply a fixed sequence, by adjectives (the former, the late, the erstwhile, the quondam, the future, next, the present, the sometime, recurrent, sporadic, intermittent) and their derived adverbs, and by a host of substantives such as the names of standard time intervals and landmarks, not to mention measuring instruments. When do these forms appear in the speech of children? I do not know. I do know that children are likely to seize on a single term such as "last night" and use it as a catch-all term to refer to points in time. Here again the child's thinking seems to outstrip his vocabulary.

One important variety of deixis is the use of status terms and forms, the varied ways one speaks to people in different relationships. One still occasionally hears the use of the third person to an individual of higher rank: "Would the gentleman like his coffee now?" Roger Brown has written amusingly on status terms. I am reminded of a publisher's representative, new to his job and apparently somewhat in awe of professors and authors, who asked me in late summer, "And when does your curriculum commence?" Just about everyone I know has a special telephone manner of speaking, and small children ape their parents' telephone mannerisms.

Contradiction is an important linguistic operation. I have seen in two children a particular form of contradicting, consisting of "but" plus a noun. For instance, "But mommy" means that what the child has just been told conflicts with what his mother had told him earlier. He counters the assertion that people cannot fly with "But airplanes."

I do not think that the evolution of children's questions has yet been satisfactorily studied. The child asks questions of fact, not only as a means of obtaining new knowledge but also as a means of verifying hypotheses, as when a four-year-old asks about his paper cut-out boat, "Would this really float on pretend water?" His questions concern attributes, location, time, relationships, cause, mode of operation -- questions of "how" and all the "wh" words: where, when, why, whether, who, what. The child's first conditional statements are likely to take the interrogatory form "What if --- ?" (The possible conditions that the child asks about are likely to be rather horrendous, as "What if the bridge broke when we were driving over it?")

One group of operations that has been fairly well studied is the early references to number -- counting, summing, subtracting, measuring, and so forth. I would like to say, though, that the child in his natural environment shows much earlier and greater proficiency with numbers than is indicated by experimental studies. One would expect, intuitively, that all kinds of comparisons would be related to numerical comparisons; it seems an easy transition from more and less, bigger and smaller, to better and worse, more generous and more stingy, more direct and more devious, and all the rest.

Since I obviously cannot take time to dwell in detail on all the variety of linguistic operations, let me enumerate some of the others that interest me: the use of variable terms, such as somebody, something, somewhere, somehow, and the like; pro-terms, including pronouns, pro-verbs, and other pro-parts of speech, which substitute a general term for a previously used specific one; idiomatic forms; counter-factual statements, including nonsense, fantasy, lying, and different sorts of humor; making exceptions; verbal representation of subjective states; description; finding analogies; defining words and interpreting statements; drawing inferences and making logical extrapolations; statements of single and multiple contingency; irony, sarcasm, burlesque, and ridicule; bragging and lording it over; the use of subjunctive forms; the use of impersonal constructions and, relatedly, all the devices by which we tone down an utterance, as when we want to criticize someone without hurting his feelings. We should be aware, too, of how the child comes to observe the obligatory features of grammar, even when semantic clarity does not need them. We all understand well enough the admonition to brush three times daily, especially if it is coupled with another visit to one's dentist semi-annually; but "brush" is exclusively a transitive verb, and used thus it moans piteously for its missing object.

Assuming that we have here the makings of a system of developmental categories, what do we do next? I think we need to make observational studies, longitudinal where possible, to establish sequences and dependencies in the appearance of linguistic operations. We need to devise play situations and pictorial materials and conversational gambits that will provoke utterances of the sort we are looking for. Such devices can serve, first, as experimental techniques and perhaps eventually as diagnostic ones. We must coordinate our observations of linguistic development with circumstances in the developmental environment. We should test over extended time spans the predictive power of classification based on use of linguistic operations. We may then get clues to early educational arrangements that will enable many more children than now do so to reach advanced intellectual status.

Joseph Church, Professor and Chairman,
Department of Child Study, Vassar College,
Poughkeepsie, New York

CLOSING THE MEANING LOOP THROUGH PROGRESSIVE CHOICE STRUCTURE

Ruth Ann Davy

The emphasis of this paper is on the function of the brain rather than its physiology or anatomy. Basically, one can view the brain as an organ or instrument which transforms sensory phenomena into perceptual phenomena. More concretely, for example, a particular pattern of sound waves becomes a meaningful term, such as "apple"; and when this spoken term "apple" is organized into the visual code we call print, the person who can read obtains the same information about "apple" through his visual sensory apparatus as through his auditory sense. Of course, sensation must be meaningful. The learner relates the spoken word "apple" to a red, juicy, tasty object. And if he is reading "apple," he must make the same associations to the print that he would to the spoken word.

Thus, a spoken word in speech and a word in print may both be seen as stimuli which carry the same meaning but require the use of different sensory modalities. The development of reading skills, then, can be seen as learning which requires the learner to perceive the same meaning for a term perceived visually (in print) as for a term perceived audially (in the spoken language).

The progressive choice reading method is a step by step method for transforming a perception from one sensory modality to another -- that is, for transforming the meaning of a stimulus (a known word in speech) from the audial to the visual mode of perception. Or to refer to the title of this paper, progressive choice is a method of closing the meaning loop between heard and seen stimuli.

Before I discuss the steps in this transformation from the audial to the visual mode of perception, I would like to talk a bit about the background of the progressive choice method, as well as the research concerning it.

About 12 years ago, Dr. Myron Woolman, a psychologist and currently Director of the Institute of Educational Research, developed the basic notion for a PC method. He saw progressive choice as a general method applicable to any training or learning situation; that is, progressive choice was not designed as primarily a reading method or a method for exceptional children. In fact, progressive choice principles have been used in many of the training programs in the military, most notably the NIKE missle operator training system. As we are primarily interested in psychology and methodology as it relates to education, however, I will focus my comments on the history of progressive choice toward its educational application for children. ---- In teaching reading, Dr. Woolman broke the English alphabet into three groups: letters solely angular in shape, as M, N, K; letters solely curved in shape, as O, C, U; and mixed letters, as P, R, B. (He considered capital, or upper case, letters only.) Then, to teach the letter-discrimination quickly, he paired angular shapes with curved or mixed shapes. He taught only one response (a sound) at a time to any letter.

Dr. Richard Bloomer, now teaching at the University of Connecticut, has used Woolman's progressive choice reading method with first grade children in regular classrooms. The results of his studies have been reported in the January, 1960, Journal of Educational Research and the January, 1961, Reading Teacher. His experimentation with Woolman's progressive choice reading method has consisted of six independent studies, involving 561 children. The criteria used to evaluate performance were standardized reading tests. In no case was the mean performance of any control class superior to the mean performance of any experimental class. Average superiority of the experimental group was 4.3 months in word recognition, 3.4 months in sentence reading, 2.9 months in paragraph reading, and 3.4 months in average reading. In summary of the six studies (N = 561) comparing relative grade level at the completion of first grade, reading achievement as indicated by standardized tests for progressive choice trained children and children trained by conventional reading methods is as follows: six percent of progressive choice trained children and 29 percent of control children had reading scores below 2.0; 42 percent of progressive choice trained children and 18 percent of control children scored above 3.0; slightly more than 50 percent of both progressive choice trained children and control children were at the second grave level. Bloomer's data shows that at the end of first grade, significantly more progressive choice trained children, as compared with children taught by conventional reading methods, attained scores at second grade level and above third grade level.

Several years ago, I became interested in the possibilities of adapting Dr. Woolman's progressive choice method to teaching reading to retarded children. In a very raw pilot study, I used progressive choice with thirteen retarded children, ages 6 to 14, MA range 3-1 to 6-4, and measured IQ range 43-55 with one IQ of 70. Results of testing before and after long vacation periods (summer recesses) showed that the children retained a large percentage of learned material. The seven children who participated in the program for one full school year progressed from a non-reading level to being able to recognize and print most of the letters in the alphabet and to use these letters in a few simple words. The three children (ages 11-13, IQs in the mid-50's) who were in the program for two full years progressed from no functional reading to the level of reading meaningfully, with little or no help, sentences and stories considered appropriate for regular class children at approximately the first, second, and third grade levels.

This pilot program, with its promising results, is subject to several criticisms, not the least of which is that the children's teacher, namely myself, was deeply involved and interested in the program. However, there was indication that the method should be investigated further for retarded children. In May 1962, the National Institute of Mental Health awarded the Institute of Educational Research in Washington, D. C., a three year grant for the development, testing, and revising of a progressive choice method for teaching reading to retarded children. Dr. Woolman, Director of the Institute of Educational Research, is Principal Investigator and I am Project Director.

There are approximately 500 children in the current study. Half are using progressive choice methods; half are using conventional methods. Age range is 6-16. IQ range is about 30-80. The children come from three public school systems and several private schools. The study began in September, 1962, with the administering of the pretests. These included the standardized Metropolitan Achievement Test for Reading and Spelling, and the newly-devised Progressive Choice Marginal Diagnostic Reading Test.

There are two features of the Progressive Choice Diagnostic of special interest to people involved in testing retarded children: (a) only one test-marking response is required throughout the entire test (coloring a small circle, or dot, under the item), and (b) there is only one test item on any given page of the test.

After the pretesting, control group teachers continued their regular programs in reading, while experimental group teachers used the progressive choice materials that had been developed for the study. These materials are based on the step by step method for transforming the meaning of a known word in speech from the audial to the visual mode of perception, which was mentioned earlier. It is through these steps that we enable the child to close the meaning loop through progressive choice structure.

I would like to describe the progressive choice materials being used to teach retarded children to read, that is, to decode printed words (visual stimuli) into their spoken, or audial, equivalents.

Five steps are required in the learning-to-read process. For retarded children, these steps are carefully and elaborately delineated. First, we have the audial meaning level. Here, we teach the child the spoken words that he will eventually be reading. We firmly establish these words in his listening and speaking vocabularies. These words are composed of highly discriminable, or dissimilar letters. For example, the first words taught in progressive choice reading are "MOM," "POP," and "MOP" because of the combination of angular "M," curved "O" and mixed "P" letter-shapes. Inherent in the program is that the child must always demonstrate understanding. The mechanism used for showing comprehension is a selection of a choice from amongst several alternatives. For example, the child may be presented with pictures of five objects, one of which is a mop. He must choose and circle the mop to demonstrate his capability for understanding the word "mop" at the audial meaning level. Once the child can demonstrate that he understands and can use these three words in his speaking vocabulary, he can go on to the next step, which is the discrimination level.

At the discrimination level, the child learns the characteristics of the "M," "O," and "P" letter-shapes. To begin, the vertical straight-line of the "M" is paired with curved lines and another vertical straight line. The child chooses the line like the model straight-down line. Then the "M" shape is paired with dissimilar shapes and another "M" shape. The child is always faced with several choices and selects the shape like the model shape. Gradually the choice-shapes become more and more similar to the model "M" shape, until the child is successfully discriminating "M" and "N," "M" and "W," and so on.

After the child has demonstrated his competency at the discrimination level, he moves on to the third level, identification. Here the child simply overlays one particular sound onto the known shape. In the beginning progressive choice reading program (called cycle I), each shape has only one associated sound. For example, the phonetic sound for the letter "M" is taught; the phonetic sound for the letter "P," and so on. After the child associates the appropriate sound with the shape "M," can print "M" upon hearing the sound, and can say the sound upon seeing "M," he moves to the next letter, "O." Here again he learns to discriminate the "O" shapes and to identify the "O" shapes with the sound of the letter.

Having two letters with their associated sounds well in hand now, the child is able to move ahead to the fourth level, compounding. Here he is systematically taught to blend his two letters, "M" and "O" into the unified sounds "mo" and "om." Notice that he is required to reverse the direction of the letters, that is, he must be as able to read "mo" as well as he is able to read "om." The child must demonstrate proficiency at the compounding level even though the presented compounds are meaningless. Later in the program, some meaningful compounds (i.e., words) are shifted into the compounding level, and it is hoped that the child will independently discover the meaning of the compound.

The introduction into the fifth level, visual meaning, makes dramatic use of the skills developed at the compounding level. For example, the child is presented with several printed compounds, as perhaps "OMO," "OOM," and "MOM." He reads these compounds aloud, utilizing the sounds he has learned. Hopefully his face will alight upon sounding "MOM," and he will say something like "MOM, That's my mommy." Frequently this happens, and the child has closed the meaning loop for himself; he has discovered that he can decode print into spoken or audial equivalents. If however, he reads the three compounds more or less dispassionately, the teacher reviews audial meaning of "MOM" and perhaps asks a leading question like "Who cooked breakfast this morning?" and the child reads the three choices, selecting "MOM" (we hope).

Although all levels or steps in the progressive choice reading method are vitally important, the visual meaning level is critical. The child must obtain from the printed word the same meanings that he obtains from its spoken form. He must, in fact, make an equivalent perceptual transformation from the oral, (or heard, or audial) sensory modality to the visual sensory modality.

After the child has established competency with what is termed segment one, that is, the three letters "M," "O," and "P" and their words "MOM," "POP," and "MOP," the child moves ahead to the next set of letters, "S" and "T." Here again a curved "S" and an angular "T" are paired. And again, the child moves through the audial meaning level, where he learns to use the goal words in his listening and speaking vocabularies; to the discrimination level, where he learns the shapes "S" and "T;" to the identification level, where he learns one sound for each shape; to the compounding level, where he learns to combine "S" and "T" with each other and with "O." After the child has completed visual meaning of this segment, his word pool numbers nine: "MOM," "POP," "MOP," and "TOM," "TOP," "TOT," "POT," "SPOT," and "STOP." Segment three teaches "A" and "G." With the addition of another vowel, the word pool is sizeably increased. It can be seen that as the program moves along, for each letter-sound (or shape-sound) association learned, the child's reading capability increases by many actual words. Once the child has learned the techniques in the initial stage or cycle of this method, the learning of only 25 letters (no Q) gives him a reading capability of over 600 words.

Here, then, is a reading approach which begins not with the printed word, but with the spoken word -- an approach which guides perceptual development by carefully selecting and structuring that which is to be perceived; an approach which keeps to an absolute minimum the number of things which have to be learned, the number of responses which must be associated with a given stimulus; an approach which initially enables the child to utilize his already existing audial language and speech capability to develop his visual perception of printed symbols; an approach which enables even many very retarded children to enjoy the power and independence of reading. Indeed, here is an approach which enables children to use the meaning loop to bridge the abyss between the spoken and the written word.

Ruth Ann Davy, Project Director, Institute
of Educational Research, Inc., Washington,
D. C.

IMPLICATIONS FOR CURRICULUM FROM CHILD DEVELOPMENT RESEARCH

Evelyn D. Deno

The most important contribution that child development can make to special education is a point of view about growth and development that embraces concepts directly relevant to the habilitation of handicapped children. An educator's basic assumptions about how desired outcomes are most likely to be fostered, his beliefs about the immutability of certain characteristics, his ideas about the reversability or irreversability of processes, his theory of behavior causation will subtly or not so subtly color all of his program and curriculum decisions. Child development research has yielded so rich a store of concepts which are significant for curriculum planning that only a few examples can be held up for review in the short period of time available here. Let us sample some of the best substantiated and most relevant of these generally accepted child development principles.

I. One factor models or theories do not suffice to explain behavior. Multiple causation is a cardinal developmental principle.

We tend to think of development as a single line and force its representation into words which move along a single dimension. The developmentalist, however, operates on the principle that the human system is a complex manifold moving through time. It is basically an open system with high input and high outgo. While much of this internal and external action is transactional, the organism carries some experience forward and thus modifies itself. Development is process. It is interweaving. It is spiral. It is not adequately described by a straight line in any phase. Behavior is a complex adjustment of the organism issuing from multiple factors. Although some extreme pathological conditions may make it impossible for the whole to function, it is clear that for most individuals homeostatic mechanisms function above a lower limit beyond which single factor theories offer no solution. Single factor theories are based on conditions which may be necessary or important for function but which do not determine when these limits are met.

We are dealing with the genetically fixed adjustive limits of the human species. These outside genetic limits are further narrowed by the phenotypical parameters of adjustment potential conditioned by the presence of a handicap. We have the stimulating, influencing milieu in which development proceeds and we have for each individual the unique organismic reconciliation of all these factors which provides the launching pad for each successive step in his adjustment to living. A developmentalist cannot relax into comfortable, simple-minded explanation.

Implications

1. Knowledge that a child is blind, deaf, crippled, has a certain IQ score or no arms will not suffice to predict his behavior, the mechanisms he will use in adjustment, or the character or style of integration he will develop. Characteristics of the organism (such as handicap) will set limitations on the openness of the system but handicap alone will not determine the individual's developmental course or outcome. A child has more things "going" for him than that.

2. Knowledge that a group of children share one common characteristic of exceptionality does not provide sufficient basis for predicting the curriculum needs of individuals within the group. Children are no more likely to be alike in very important learning characteristic because they share a common disability than they would be if they did not share a common disability. In fact, they will probably be less similar because the adjustment of each one will be more novel as a result of the phenotypical diversion of "normal" adjustment tendencies. A handicapped child is, in a special way, a mutant.

   It amazes a developmentalist to hear people talk about the blind as though they could not be both blind and slow-learning. Not all low scoring blind children are pseudo retardates just because they are blind.

3. A special educator with a developmental point of view knows that he cannot escape being concerned with the multiple factors which the exceptional child is having to integrate to form his own, unique homeostatic balance. A special education curriculum centered entirely on academics ignores other facets of adjustive potential. A handicapped child has too many strikes against him to ignore any assets on which he can capitalize -- respectably academic or not. The curriculum must enhance the probabilities of moving the total organism toward a more effective level of integrated functioning.

   The special educator imbued with a developmental point of view is not likely to cringe when "traditionalists" attack life adjustment as too ambitious an objective for education to assume. What other position could a child development-oriented educator assume? It might be said that a special educator's entire professional raison d'etre was to bring his special knowledge to bear to help uncommon children achieve a creative, uncommon adjustment in a world built around conformity to common characteristics. It is this recognition of need for attention to all significant factors affecting adjustment efficiency which weds the fields of special education and rehabilitation into one common discipline.

II. Organismic development cannot be adequately explained by mechanistic models.

Evidence accumulates that the entire nervous system is involved in even what seem to be very simple response patterns. There is much support in developmental research for an entropy or flow theory of stimulation rather than a nickel-in-the-slot conception of association.

Two mechanisms operate in the developmental process: (a) growth, maturation or unfolding and (b) learning. The first is an age-bound process marked by differential increases in time in almost every function and process. The latter constitutes a stabilization of pattern in response to repeated stimulation. These two mechanisms do not operate independently. For example, while the general appearance of the response pattern of walking resembles learning and in popular parlance is described as "learning to walk," it is clear that the learned part of the response is a refinement or an elaboration of an unfolding direction within limits which are set by internal characteristics of the organism. However, a child given no opportunity to learn by reducing the number of unserviceable responses will not become an efficient performer on the basis of maturation alone.

Implications

1. No matter how much we know about conditioning we cannot, by externally stimulating the child, appreciably advance the appearance of certain kinds of behavior for which a basic state of maturational readiness must prevail (McGraw studies). We note a critical (to us) change in behavior and speak of the child as having "learned" the behavior at that time. We mean that the particular behavior we regard as the criterion of learning emerged at that time. We tend to mark transformations rather than learned increments. The organism is finally triggered to behave in the looked-for way because it is finally ready. If we knew enough about what goes into each child's readiness, we would know that every child is performing at expectancy level. The emergence of criterion phenomenon may or may not be significantly the result of our formal teaching efforts. Much formal teaching (i.e., stimulation to behave in certain ways) is an act of faith based on the rituals we as teachers have come to associate with emerging phenomena.

2. While a child cannot behave as he is not ready to behave, readiness is not entirely internally determined. There is much evidence that certain kinds of stimulation must occur if phenomena are to fully unfold.

   This concept is a particularly significant consideration in appraising what the presence of a handicap does to a child's development. Like every living thing, a child has apparatus for scanning the world, for taking in information, sensory input which stimulates the setting off of internal mechanisms. These input channels are part of the organism's monitoring system for achieving and maintaining homeostatic equilibrium.

   Deprivation of information input can have serious consequences on developmental course. We need only think of how relatively frequently we encounter "extremely primitive, pseudo-autistic young blind children" (as Elonen and Cain describe them) to visualize how ego unfolding and stimulation to unfolding are irrevocably entwined, and we are well aware of how inadequate and inaccurate a deaf child's concepts may be because he is deprived of an important information input channel.

3. The evidence, however, does not permit us to be bewitched into thinking that because a body part has become partially incompetent or totally destroyed that any resulting disturbance is a consequence of the missing part. A hypothesis that would better fit the evidence and put us in a more constructive position to help the child is that the child's behavior is the outcome of what is left, not what is taken away.

    Machines do not have the capacity to react with what is left behind. This makes a machine model inadequate for predicting the developmental outcome of a handicapped child. Adjustive and regenerative resilience over time is one of the most striking characteristics of living systems. The manner of adjustment may not be typical, but we can be sure that if he lives he must adjust.

    Usually, when stimulation is restored, the individual has great capacity for recovery, especially when deprivations are experienced during growth. What is not so certain is the ultimate effect of deprivation that continues after the rapid phase of growth has ceased. This matter of stimulation timing is so important that it merits consideration as a major generalization.

III. There is considerable evidence from child development research to support the hypothesis of developmental pre-eminence, i.e. that there are certain critical periods of development during which an organism is especially susceptible to environmental influences.

These critical periods seem to fall at the periods of most rapid growth or change. Evidence supports the hypothesis that disturbances of stimulation (i.e., deviation from what is usual for the species) have their most profound effect when they occur just before or around the time that transformation behavior generally emerges (Lorenz, Harlow, Bowlby, Fullerton and Thompson, Richmond and Lipton, Scott and Marston).

Implications

1. The seriousness of this generalization will be related to the question of to what extent the effects of early sensory deprivations have an irreversible effect on the developmental process. Because of the great risks involved, most experimentation in this area has been done on infrahuman organisms (cats, dogs, primates, and birds).

    The implications of this finding are so important that the matter merits some exploration. In a recent article in the Journal of Abnormal and Social Psychology, Eisen relates this hypothesis of the importance of stimulation disturbance at critical periods to the later problems of what he calls the "quondam hard-of-hearing child." It is frequently assumed that a child who could not hear well at the age of two or three, the age when language is developing rapidly, will have no difficulty in picking language up if his hearing is later restored. Eisen reports his observation of several cases where later adjustment difficulties seemed related to the earlier auditory deprivation. He notes that the observed maladjustments (which included inattentiveness, difficulties in localization of sound, low verbal facility) became more evident in stressful situations, just as Wolf had noted in his experimental work with rats. (Wolf deprived rats of their hearing during nursing. They seemed to adjust adequately in later life with full development of their sensory resources until their security was threatened by their being placed in a stressful, competitive situation.)

    Inasmuch as children almost never skip phases in the development sequence of maturational skills, however brief the time may be that they spend in any given phase, it behooves us to make certain that our curriculum allows for the orderly building up of sequences in concept development. We assume far too much in this regard in our programs for both normal and handicapped children.

2. To what extent are we trying to improve children's adjustive behavior when the child is already beyond the age where our special knowledge can do the most good? Few states have special education laws which permit us to reach out to children at the most critical-for-learning phases of their development. Harlow's studies with monkeys suggest that lack of social interaction with age peers at early stages may be more critical for socialization tendencies than the presence of a real mother. Scott and Marston working with puppies found that the most critical period in development of social behavior was when maturation of sensory, motor, and memory capacities coincided with the first development of outside relationships. In children, this would be long before most formal educational programs enter the picture.

We recognize that formal instruction in any skill is dependent upon an intimate relation between pupil and teacher as well as the child's general developmental competency. What happens to blind and deaf children who are left too long unrelated because incommunicado?

Physically intact children from home backgrounds which do not reward verbal or symbolic manipulation of relationships may suffer serious learning disability as a consequence. After studying learning problems among lower socio-economic groups in Israel, Simlansky concluded that these children needed teaching methods "adapted to the promotion of their general development as well as to the teaching of reading."

The appearance of language constitutes a radical transformation in behavior because it makes possible mediating responses or second order signals. Symbols which can be readily substituted for complex chains of experience and behavior and are highly manipulatable permit kinds of behavior organization which are not possible at ordinary levels. The acquisition of language is the greatest single transformation in the development of the human being. The process of thinking involves the reorganization of relationships through mental manipulation of symbols. Possession of language permits a passive recipient of stimulation to become a manipulator of his environment and develops organizational relations which affect every behavior area, including the social and emotional.

Does any amount of later stimulation entirely compensate for lack of reward of a child's early communication signals? Dr. Hilde Bruch theorizes that if a mother's response to a child is so one-sided that she alone initiates behavior and remains impervious to all signals initiated by the child, the child will become an individual who lives entirely by responding to stimuli from others -- either with passive compliance or rigid negativism. Such a child may never develop the faculty for experiencing thoughts, feelings, and actions originating within himself as his own. Because he has not been recognized, he is not real to himself. For such a child, curricula and methods which emphasize patterning and structure and suppress spontaneity may do the child a great disservice.

IV. Longitudinal studies in child development suggest that individual growth curves are far more irregular than the relatively smooth curves derived from cross-sectional studies of group trends. Couple this with extra length of time it may take for a handicapped child to learn how to use what he has left, and we have ample reason for guarding against too early certainty about how a child will turn out.

Implication

The curriculum should help the child to reach for a high level of adjustment. Depressed expectancies can suppress achievement. A handicap does impose limitations on achievement, but child and teacher will need to explore together the true character of the limitations it imposes. There is enough probability of error in individual prediction to warrant reservation of judgment until terminal outcome is within range of close assessment. This is the point in development at which the goals of vocational rehabilitation and special education coincide. The two disciplines can profitably combine to make curriculum provisions which allow the handicapped person to test his capacities for social and economic self-sufficiency. Because of restrictions imposed by his handicap, the exceptional child loses out on many kinds of reality exploration which the normal child has opportunity to try out incidentally. For instance, it is logical to consider collaboration in special education and rehabilitation programming at the later secondary level by putting the severely physically disabled through a prevocational evaluation sequence to give realistic guidelines to the scheduling of his high school work. Summer employment in a sheltered workshop setting under Vocational Rehabilitation auspices would help the pupil test his own work tolerance.

V. Many investigators, studying the development or unfolding of intelligence in both normal and pathological cases agree that an IQ score can be interpreted only in relation to developmental history. They agree that intelligence is not a unit factor which increases in a neat ratio to chronological age at a developmental rate which is fixed by pre-determined growth potential.

From her longitudinal studies of intellectual growth in normal children, Bayley concludes that infant test scores offer little help in predicting later intelligence test scores because the functions measured at the later age are not all present in functioning form in the infant. She sees different capacities to function emerging at different phases of mental development.

Richards argues that IQ changes should be thought of as more than mere unreliability of measurement. Weisskopf develops a similar hypothesis. Reasoning from pathological cases, she says, the same emotional factors which cause pathological intellectual blocking in some individuals may, by being present in different degrees, become responsible for quantitative and qualitative difference in intelligence within the normal range.

Implications

1. Selection criteria for either special education or rehabilitation service should be fairly broad and flexible, especially in view of the fact that the more closely we diagnose a case, the more it becomes evident that factors other than sheer lack of intellectual power can cause learning retardation in a functional sense. We need to remind ourselves unremittingly that IQ level is not the same as capacity for intellectual development under optimal conditions. It is our job to optimize conditions for development of maximum functioning level. If we have been serving a pupil whose functioning falls below reasonable competitive adjustment standards, we cannot excuse ourselves from further obligation to help the pupil because some IQ measure yields a score above 75, 80, or 90.

2. Program organization should allow for free movement among kinds or levels of service so curriculum experiences can be paced to changing potentialities for performing in the individual case.

3. Curriculum adjusted to an expected learning rate is ignoring the possibilities for change in functioning which might be produced by not having such set, preconceived expectancies.

The developmental literature suggests that we should carefully assess where a child is in his developmental course and proceed to set up conditions which will promote his movement through the relatively orderly sequences which human development follows. Curriculum planning which proceeds from norms or age-related expectancies is not making use of the information we already have on how failure to have the desirable developmental experiences at a particular age may have unnecessarily fixed a child at an immature developmental level or produced distortions in manner of coping with developmental tasks which appear as inherently poor growth potential. This point needs to be kept assiduously in mind in arranging learning experiences for culturally deprived children.

Conclusion

The list of curriculum relevant generalizations from child development research could be extended at great length. Time does not permit us to exhaust the possibilities but perhaps the small number of developmental principles sampled suffice to support one major developmental point of view. That is, that functioning cannot be understood without knowing its developmental history and that professional people working with exceptional children can draw from evidence on how development may be influenced to develop a theory of how to educate or re-educate individual cases.

To a developmentalist it seems clear that the greatest help will be gained from research investigations which examine what special education methods are right for whom rather than from those studies which compare one broad method against another in coarsely defined populations: e.g., special class vs. regular class placement for the retarded; integration vs. segregation in the deaf. We have passed beyond such gross considerations in what we have already determined about the reciprocal relation between developmental course and experience. We are more than ready for sophisticated, analytic analyses which can lead us to more precise prescription of developmental needs and the learning experiences most likely to promote the desired development in the individual case.

Evelyn D. Deno, Consultant in Special Education, Minneapolis Public Schools, Minnesota

WHEN TODAY'S HANDICAPPED CHILDREN BECOME ADULTS

Salvatore G. DiMichael

We meet at a time when the education and rehabilitation of physically and mentally handicapped children and adults is commanding public attention, no longer on a local or state basis alone, but in the national spotlight as well. For example, in the President's message to Congress known as the "National Education Improvement Act of 1963," there were explicit proposals to make training grants to colleges and universities to prepare teachers and other educational personnel for handicapped children, especially the mentally retarded and the culturally deprived. Also, the President's Panel on Mental Retardation and the Joint Commission on Mental Health and Illness have made their reports to the nation. As a result, the President submitted a series of proposals which called for a substantial step-up of efforts on a broad scale to help the emotionally disturbed and the mentally retarded. He said that the appalling neglect of the past century had to be overcome by an enlightened approach; he asked for the sum of 500 million dollars in federal funds to stimulate all segments of the country, down to the local community.

This recent development is no flash-in-the-pan. Several significant actions preceded it and undoubtedly laid the groundwork for new advancements. In 1954, the National Cooperative Education Research Act was passed. Two years later, and each year thereafter, Congress appropriated funds with the understanding that a substantial part, over one third, would be used for special education. In 1955, earmarked funds were made available to the U. S. Office of Education to devise a plan to improve education for the mentally retarded. In 1959, national legislation was passed to train educational leaders in the field of retardation. Last year, another act of Congress initiated a federally financed university program for training teachers of the deaf. And a congressional subcommittee held hearings and sponsored a study on needed programs in special education and rehabilitation.

In vocational rehabilitation, the national advancements have been most unusual and have had an impact on many related programs such as special education, social security, public assistance and health. Last year, for the first time, over 100,000 rehabilitations were accomplished. Long-term training programs have been established at colleges and universities in professional disciplines such as medicine, counseling, social work, psychology, speech, occupational and physical therapy. In addition, many short-term training projects have been conducted, with special emphasis on better coordination of interagency efforts. The research and demonstration projects in rehabilitation are now over 850 in number. Since the amendments of 1954 were passed, these research activities have pioneered into previously unexplored areas and have blazed new pathways for rehabilitating the more severely disabled.

Although the progress of the past and present is heartening, there is so much yet to be done. At present, about one and one-fourth million handicapped children are in special classes receiving the specialized education which they need; there should be five million, according to the President's Panel. The vocational rehabilitation program rehabilitated over 100,000 disabled adults last year. The goal set eight years ago was 200,000. The latter estimate represents merely an intermediate number, not the real group of people in need. Our efforts in the years immediately ahead should be directed toward extending the services to handicapped children and adults; at the same time, we must improve the quality of our services.

When today's handicapped children become adults, they will be much better prepared than ever before to take their places in family, community, and productive employment. Many more of them will be contributing citizens, taxpayers, and credits to their communities. They will be ready, in greater numbers, to take jobs for which they were prepared. Our advanced methods in special education and in rehabilitation will have developed their assets and helped them to make up for their handicaps in realistic ways.

The record which they will make in their roles as workers will depend upon the over-all conditions of our economy; the predictions based on current trends are optimistic. By 1970 it is expected that our total population will increase by 15 percent, our per capita income by 25 percent, and that there will be gains of as much as 50 percent or more in the number of special classes and rehabilitations. Automation is expected to cause temporary displacements, dislocations and difficulties, but the over-all effect should be more jobs and productivity. The physically and mentally handicapped children of today should be able to locate suitable jobs when they are prepared.

Automation should have no more adverse effect on the handicapped than on other people as long as the disabled have received the benefits of a comprehensive number of needed services, including special education and rehabilitation.

We have progressed now to a stage in which every physically and mentally handicapped adolescent could be given the chance to show whether or not he can engage in productive employment as an adult. For example, as many as 75 percent of the retarded could be prepared to do full-time productive work as adults of working age. With the efficient use of sheltered workshops, perhaps an additional five to ten percent could engage in sheltered work of a partially self-supporting kind. The President's Panel on Mental Retardation has challenged the nation to provide fuller opportunities to this handicapped group. With the full utilization of modern knowledge and advanced skills, we can rehabilitate many more of the severely disabled. The results are eminently worthwhile for the handicapped, their families and the nation as a whole.

Salvatore G. DiMichael, Regional Representative, Office of Vocational Rehabilitation, New York City

READING INSTRUCTION IN THE PSYCHIATRIC SCHOOLROOM

Katherine B. Douglas

Reading instruction for children in a psychiatric hospital is scarcely different from reading instruction or remediation in a normal schoolroom. The same word recognition techniques are taught, and many tools for unlocking words are given to the child in the hospital class, as they are in most schools. No particular "method" is used by this teacher, but rather an eclectic approach is employed, variations being occasioned by differences in the child. If there is a shift of attack or alteration in approach, it lies not so much in the things taught as in the way in which they are taught. The teacher in the psychiatric ward needs the skills necessary for the teaching of good reading techniques and habits and a clear-cut understanding of the dynamics of the mental illnesses which prevent children from learning anything.

Although no one can deny that failure to learn to read well can affect the child's emotional health, since failure in any area of high cultural expectation can cause emotional discomfort, it is interesting to note that in my particular setting reading is not the area in which most distress is found. In an unpublished study done by the speaker a few years ago, grade placement of the hospitalized child was compared to his achievement in three broad areas -- reading, spelling, and arithmetic. The breakdown of learning seemed to fall not in reading but in spelling and arithmetic. There is a catch to this, however, which should not be ignored. It becomes clear as one works with these children that, although they have the ability to read well those things which it pleases them to read and which help to defend them against intolerable situations and trauma, they do not carry over their skills to school-related readings with much success.

So the task of the teacher in a psychiatric hospital schoolroom is not so much "remedial reading" as "remedial thinking and use of reading." There are always some who need remediation in word recognition techniques, but there are many more who need to learn how to put them to practical use in order to meet the demands of the culture in the school setting, where effective reading is a kind of status symbol.

For those who do need remediation, the problem of attitudes is of great importance. Achievement testing is done, and the proper materials are selected and tried. A tentative program is started after weighing the child's tolerance for concentrated attack, his need to be "lost" in a small group, or because of exaggerated dependency needs or disturbing symptoms related to his illness, to be seen individually. This teacher has learned to be cautious about the optimal time for beginning a program, having found that it is often wisest to start work in another area less sensitive until the child builds confidence in himself and the teacher. Sometimes it is well to wait until the child begins to wonder why he is not again being put through his paces in the old detested reading task. When enough cues make it apparent that he is ready, the program is talked over with him, and he helps make some of the decisions.

The teacher may find it refreshing for the child and helpful in implementing a reading program to start with teacher-made materials, employing as much reference to the child himself as seems reasonable. If he uses the student's name, he can be assured that the child will know at least one word in the sentence. It seems an equally good idea to me to listen to the child's vocabulary and include some of the words that appear to be significant to him. If he can't recognize them at first, he will often learn them quite readily. In finding and suiting materials to the program, the teacher's ingenuity can be severely taxed, and each teacher has his own techniques. I, for instance, like the typewriter, not only for the help it gives in encouraging proper orientation, eliminating reversals, etc., but also for its contribution to motivation and increased concentration and attention span. Children put a high premium on using machines, and they tend to learn inner controls if there is a reward to be gained after an appropriate amount of work is done. The use of the typewriter offers one such reward. As an example, there was one child with few controls and a great distaste for school work. He learned to work independently, however, because he could use the typewriter in studying his spelling near the end of the hour. Incidentally, he became a pretty good speller, too.

At the University of Minnesota Psycho-Educational Clinic, we found a youngster -- placement 5th grade, reading vocabulary zero. Five years of phonetic attack yielded only frustration. This child was not deaf, but he could not distinguish phonetic parts. A resourceful teacher, using finger painting and a total visual approach, taught him in ten weeks to recognize 80 words without hesitation and 40 more with occasional errors.

-- ------

Some of the youngsters I see have little difficulty in most areas, but many more of them, although they have reading skills of a sort, do not know how to put them to practical use. One child could read very well, but she did not have sufficient energy or interest to apply it. She could read her social studies and the arithmetic problems, but she could not summon sufficient aggression to form usable concepts.

It is not uncommon to find children with fine recall who can memorize the population or size of states or cities but cannot compare them to each other. They can read the word "compare," but they have no real understanding of its meaning or of its demands.

Some of my pupils read many books from the library for their own pleasure but have never learned sufficient self-discipline to read social studies and retain the material long enough to discuss it, even immediately thereafter, with the teacher. Sometimes they completely misunderstand the import of a paragraph because, although they can call the words, they have limited "understanding vocabularies." Lacking the ability to conceptualize, to abstract, without the inner controls and self-discipline so necessary in applying attention to a given task, they cannot follow directions, get specific meanings, or even understand the general significance of a good deal of what they read.

A few days ago, in checking a social studies quiz provided by the text, I remarked to Lynn that she had not answered the questions but had selected any kind of information surrounding the topic as an answer. She was more than a little puzzled by my demands and somewhat cross and finally concluded by accusing me of having overnight changed the questions printed in the book. She was sure that they were not like that the day before.

The problem, more often than not, goes back to the dynamics of the child's emotional disturbance. Fortunately, the teacher in a psychiatric setting is not tramping around through the brush of half-understood attitudes and motivations. He knows that he can depend upon the team to help him find a trail through the clutter of minutiae.

There are two big areas in which the teacher must make quite accurate evaluations. First, it is well to know the background and dynamics of the illness in order to avoid traps which may cause breakdown in rapport or may increase the trauma which contributed to the illness. Second, the teacher must know himself very well so that he may anticipate his own emotions and attitudes related to the behavior of the child. He must know what he is doing, when it is practical to do it, and exactly why he is doing it. He must know when it is safe to confront the child with certain kinds of behavior, when to set limits, why and how many and for how long, how much he as a teacher can tolerate without becoming too angry or frustrated, and even when it is appropriate to be angry and when to be accepting. He must be able to anticipate frustrations and sensitive areas which can touch off behavior storms and, when they do arise, be sufficiently controlled to handle them realistically and honestly.

Knowing the dynamics of a child's emotional illness means that the teacher may treat two apparently similar symptomatic behaviors in the way appropriate to the particular child. One child may be disruptive, negative, argumentative because he has learned this as a manipulative device. Another child may behave the same way because he is testing the acceptance in which he cannot yet quite believe. They would not be handled alike. The first needs limits and small gratification for what he is doing, and the other requires an opportunity to cool off somewhere for a while until he can deal with his feelings -- but the way is left open for him to return to the group and the teacher. There are, inevitably, some questions from the rest of the children about why Richard can get by with this and John can't. An honest explanation is due them. Children readily accept the fact that each child on the ward has a problem and each problem needs to be treated differently. They are surprisingly understanding and insightful and occasionally even able to help each other.

But let us take a look at the type of children the teacher might typically see in a psychiatric ward. In one classroom, one may find a hysteric who believes herself unable to walk without support, a boy whose behavior makes it appear that he is training to be a sociopath, one who is paranoid, another depressed, and across from him a child who is looking pretty schizophrenic, a seductive girl of low mentality, and a boy with a tic. There are, of course, the usual number of school phobias.

To deal with a group like this, the teacher finds himself constantly shifting emotional gears as he moves from one child to another in individual work or tries to include them all in a group.

For the hysteric who is being encouraged as subtly as possible to walk, the teacher arranges situations so that she will want to use her legs. The sociopathic child may be the end result of spoken or unspoken encouragement by his father to misbehave, and the teacher needs to set well-defined limits and be forever vigilant in his constancy. The schizophrenic and the paranoid children need, as indeed do all children, honesty of approach in word and emotion, but humor they can misunderstand. They must have a clear presentation of reality. The depressed child needs a way to express his anger safely. Anger so often wears the mask of depression. The child with tics of any kind needs acceptance and patience that will keep the teacher from offering more than the barest minimum of verbal reassurance. The seductive girl not only needs to be taught new culturally acceptable patterns; she needs to be watched.

The school phobias are so seldom phobic about school that Dr. Leo Kanner's term "separation anxiety" is more often appropriate. Once the separation has been effected, the children go to school with no difficulty. They read well, but they have a good deal of trouble with arithmetic.

The elective mute is a most difficult child to teach. He has phenomenal control of situations and is often well aware of it. Teaching reading to such a child is less than rewarding. I have tried all the tricks in my repertoire and haven't found any of them particularly successful. It's interesting that the first speech we hear from these youngsters when they begin to talk is frequently pretty lurid. To teach them reading, I use a combination spelling, writing, pointing method. But I have never felt I was outstandingly successful.

Such a limited sketch of the usual types of emotional problems confronting a teacher daily makes clear the need for understanding the dynamics of the illness before planning any kind of program, educational or therapeutic, for any particular child. To describe the way in which reading is taught to these children would be to describe the way in which each individual is taught. If there are any additional rules to apply, they are general and really appropriate to any kind of dealings one may have with children. None would deny that any teacher needs to know the subject matter of what he is teaching or the methods which have proved to be most practical. The teacher in a psychiatric ward must have techniques of her own which can be applied readily to any interaction between teacher and child and then be imaginative and flexible enough to change them when, where, and in the manner which seems most appropriate.

There are a few basic rules which this teacher follows with all the children:

1. Be honest academically, emotionally, and personally while avoiding an appearance of omniscience.

2. Reflect verbally the realities of the situation, including the emotions the child may be feeling if you are certain you know.

3. Never get into a power-struggle with a child unless there is opportunity for both principals to save face -- most particularly the child.

4. Know what limits need to be set, express them clearly, and be prepared to accept some aberrant behavior within those limits.

5. Make goals and expectations reasonable, related to the child's illness and native endowment.

6. Do not be afraid of discipline, but make certain it serves a specific purpose and is surrounded by acceptance of the child. Remember you are not competing in a popularity contest.

7. Maintain the role of teacher. There is an unbridgeable gulf between the adult and the child, but this does not mean you cannot interact in a way satisfactory to both.

8. Do not identify with the pupil. Relate, make an investment in each child -- but don't identify!

Katherine B. Douglas, Teacher, Hospital
Class, Division of Child Psychiatry, School
of Medicine, University of Minnesota,
Minneapolis

THE WIDENING ROLE OF PARENT ORGANIZATIONS AROUND THE WORLD

Rosemary F. Dybwad

The work of the President's Panel on Mental Retardation has highlighted the role of the National Association for Retarded Children in pioneering a new understanding in the field of mental retardation since its founding in 1950. What is not sufficiently known is that in other countries, voluntary parent-sponsored associations were being organized at the same time and with the same goals. Before 1950, local groups which were later to take on a national role were in existence in England, France and New Zealand; by 1953, when NARC's first Secretary, Mrs. Dorothy Moss, offered to act as an informal clearing house for exchange of information and experiences, she was in touch with associations in Australia, Canada, Denmark, England, France, Israel, Japan, The Netherlands, New Zealand, Norway, and South Africa, and with individual parents or professional workers in Germany, India, Ireland, Mexico, Scotland, and the West Indies.

One might well speculate about the driving force behind this spontaneous movement. It was started by no visible force; there were not then, nor were there to be for another decade, any international professional or voluntary organizations specifically active in the field of mental retardation. Nor were any of the United Nations agencies to take more than a sporadic and limited interest, while programs of international organizations in mental health, child welfare and education only rarely included any emphasis on mental retardation. It is important to point out that this development occurred in widely separated countries with widely different cultures. True, many of the early starts were made in the English speaking countries, Scandinavia and The Netherlands, where there was a tradition of voluntary organization and cooperative self-help, but the second half of the 1950's saw a steady growth of beginnings in most other parts of the world.

In 1955 when NARC's International Relations Committee had been officially functioning for a year, a twenty-page bulletin was distributed by Mrs. Moss reporting on mental retardation programs in 22 countries, 11 of which by that time had national or federated parent-sponsored associations. By 1957, the committee had active contacts with some 40 countries, and two years later with 60, of which 20 had national associations. In another 24 countries one or more local groups were active.

The present count of national or federated associations stands at 28. Those in Europe are Belgium, Denmark, Eire, Finland, France, Germany, Iceland, Italy, The Netherlands, Norway, Sweden, Spain, Switzerland, and the United Kingdom, where the Scottish and Northern Ireland Societies have affiliation with the National Society for Mentally Handicapped Children of England and Wales. Asia, Africa, and the Near East are represented by Australia, Israel, Japan, Rhodesia, Turkey, and New Zealand. In the Western Hemisphere, there are associations in Brazil, Canada, the Caribbean islands of Jamaica and Trinidad, the United States, and Uruguay, the first national association to be founded in South America.

Countries presently having one or more local voluntary organizations are somewhat harder to list with assurance since the developments are rapid. In Europe should be added Yugoslavia and Greece. In the Near East, Asia and Africa: a few groups in India are beginning to think toward some kind of national representation; South African associations have supported specific programs for many years; Iran, Pakistan, Thailand have newly formed associations; Indonesia has three or four groups managing day schools, while in Ceylon this is a partial function of the voluntary National Council for Child and Youth Welfare. Singapore's association has doubled the number of retarded children served in the last year; Hong Kong reports its first parent group; and in the Phillipines, the parents affiliated with the Special Child Study Center, which was started in 1956 and is planning toward expansion in other parts of the Islands.

Similarly, in South and Central America, associations have been started or are beginning in Argentina, Chile, Columbia, Ecuador, Guatemala, Mexico, Peru, and Venezuela. In the West Indies -- Bermuda, the Bahamas and Puerto Rico have voluntary programs and within recent weeks groups have been organizing in the Virgin Islands and the Barbados. Next month perhaps I could add Costa Rica.

Who are the people behind these organizations?

In most cases, the initial spark and on-going effort has come from the parents themselves, joining together to provide, procure, or improve services and opportunities for a better life for their children. In most cases, one also finds that fairly early in the development of the association, other citizens and concerned professional workers cooperate and participate in various ways in the program of the organization. Two examples of national associations which from the beginning were formed as a combined parent-professional-citizen movement are those in Germany (1958) and Eire (1961). In southern Europe, on the other hand, the parents feel it important to keep their identity separate, while in Yugoslavia the organizations are made up of educators, physicians, and parents. Quite a few examples could be given of associations where the initial impetus has come from an individual physician (Turkey), an educator (Uruguay), the speech therapist and the social worker of a mental health clinic (Greece). In Manila, a psychologist went from house to house to find the hidden children so that a school class could be started.

What are they doing?

The activities of the associations have varied widely in different parts of the world depending on immediate needs, although the ultimate goals are similar. When the group in Perth, Western Australia, organized in 1951, one of their early projects about which they consulted with NARC was to establish a specialized evaluation and consultation service. Ten years later this successful clinic "The Irrabeena Centre" (an aborigine word meaning awakening) was given government support and it now is providing continuing lifetime advisory help for all the retarded persons registered with it.

In general, as was the case in this country, one of the most urgent needs, after counseling for parents and general public education efforts, has been to procure educational and training facilities to enable the more severely retarded child to remain in the community. No country is completely satisfied with available services. If day school programs are adequate (and perhaps only The Netherlands can be satisfied with theirs), the associations seek to provide for the young preschool child, for recreation needs of both the retarded and their families, for more adequate residential care, and increasingly for the adolescent and adult retarded, whether vocational training and open or sheltered employment, recreation, counseling or sheltered living in the community. As one example, in May 1952, the British National Society for Mentally Handicapped Children opened the first short stay home where parents could leave a child during vacation or family emergency. In February 1963, the formal dedication took place in a London suburb of a model sheltered workshop and hostels, serving 30 young men and women. In the developing countries, where changes in the protective large family system, industrialization, and migration are bringing cultural changes, the urgent need may be to provide medical and residential care for the most severely retarded, although day school programs and opportunities for training are sought by an increasing number of educated parents for their retarded children.

Relationships to public and professional agencies differ markedly and are highly dependent on intricate cultural patterns. ---- In Holland a high percentage of government support is the general pattern for all voluntary services. Some direct government subsidies have been received by the German and Italian associations to maintain a national office. Government payments are made to the local Canadian associations to provide classes for children not accepted in the special classes of the public schools. In Iceland a soft drink tax goes to work for the mentally retarded. Other countries benefit from a system of lottery grants. There have been recent extensions of disability insurance payments in Switzerland and France to include some of the mentally retarded who did not previously qualify, but it is beyond the scope of this paper to list more types of government subsidy which indirectly benefit the parents of the retarded and very often have come as a partial result of the associations' efforts.

Nor is it possible to describe many other areas of parent association-professional-government relationships, but I would like to mention the situation in Denmark where the Director of the State Mental Deficiency Service has frequently pointed out the importance of the Danish national parent association in bringing about basic legislative reforms, and where, since 1959, the association has had an official representative on the eight-man managing directorate of the state service, as well as on the regional boards of control.

The training of personnel is always a concern of the voluntary associations, from Ecuador where means are being sought for specialized training outside the country so that services can be iniated, to Great Britain, where the recent report of the Ministry of Health's "Scott Committee," recommending more adequate training of staff of training centers for the mentally subnormal, has been the subject of much intensive discussion.

The emphasis on research in mental retardation which has characterized NARC has been followed by the associations in some other countries, notably Great Britain where the National Society for Mentally Handicapped Children initiated and supports the *Journal of Mental Deficiency Research* and is making substantial grants for the support of basic research. In Canada, the association has established a Scientific Research Advisory Board and is presently raising a $100,000 research fund. The Ontario ARC has provided the means for establishment of visiting professorships in mental retardation at the University of Toronto, which have been filled by distinguished lecturers from England. An initial grant from the Danish National Association resulted last year in the establishment of a new Foundation for Research in Mental Deficiency in that country.

Twenty-three journals and bulletins issued regularly by associations around the world are received at NARC headquarters. Some have been published for more than ten years; others are new ventures. All are excellent sources of information on new developments in legislation, new planning and the practical application of theory and method in community planning and residential care. NARC is pleased to share its newspaper title with the fine Australian Children Limited and Geneva's Enfant Limite - Amour Illimite.

It would be possible to give you many other examples of sharing of ideas and materials. For instance -- Israel has adapted the symbol of the British association as we share ours with Uruguay; Norway arranged for us to have a photograph of Professor Følling, the discoverer of PKU, with the NARC poster of two sisters, one afflicted with PKU and one protected by the diet resulting from his discovery. Many publications are shared in translations. Of particular importance has been exchange of visits between members of the various European associations, and NARC has also helped with a large number of incoming and outgoing visitors and now has hospitality chairmen of the International Relations Committee in a number of cities. The three month study tour made last year by Doctors Frances and Leo Connor was a real stimulus to the many new groups whose programs they were able to visit, from Japan through Asia to Greece. Many other professional visitors have been assisted in planning and carrying out study visits by NARC and its sister organizations to other continents.

From the earliest exchanges of correspondence between members of the parent-sponsored movement until today, one finds a deep interest and desire for the exchange of information and experience, and the conviction that we can and must learn from each other.

What can we learn?

A very brief mention of some of the programs in other countries which are of particular interest to us would include Sweden's small residential units, the specialized three-year personnel training courses for young people in Norway and Denmark, the patterns of work and living for the severely retarded in the Dutch communities, emphasis on sense training in Japan and on motor development in Germany, Great Britain's research in learning processes, Swiss teaching methods, and the correspondence school system in New Zealand, to name only a few.

What of future international developments?

The need for eventual organization of an international association has long been felt by persons concerned with the problem of mental retardation around the world. Recognizing the great difficulties in maintaining an international organization which could provide service as well as arrange congresses, and convinced that such an organization should have truly worldwide representation, NARC has hesitated to push for international organization but has attempted to maintain and to further informal contacts and exchange of information, issuing for this purpose from time to time an international newsletter.

In 1959, the first step toward the creation of a formal international organization was taken when three professional leaders of the movement in Holland, England, and Germany met to plan for a European League of Societies for the Mentally Handicapped. "The League was brought into being in World Health Year 1960 by representatives of parent organizations and professional groups and by individuals anxious to advance the interests of the mentally handicapped without regard to nationality, race, or creed." Holland, England, Germany, Denmark, and Italy were initially represented on the executive council which outlined the League's purpose as follows:

> Through the creation of a common bond of understanding between parents and others interested in the problems of the mentally handicapped, the League hopes to secure

on their behalf from all possible sources the provision of efficient remedial, residential, educational, training, employment, and welfare services.

The League seeks to realize its objects by: (a) the interchange of experts and information on the developing services for the mentally handicapped; (b) the exchange of workers in the field of mental handicap between one country and another; (c) the comparative study of legislation in member countries and beyond, concerning the mentally handicapped and the promotion and implementation of same in their favor.

In 1961, an inaugural three-day Congress, attended by four hundred people from twelve European countries and eight non-European countries, was held in London, followed by two days of observation tours in The Netherlands. At the September 1962 meeting of the League Assembly in Copenhagen, the decision was made to open the membership to all parent and other national organizations working primarily in the interests of the mentally handicapped, in any part of the world.

The chairman of the new International League is a Swedish physician, Dr. John Philipson, parent of a 30 year old retarded son, president of the Swedish national association, and vice president of the Swedish Red Cross. This eminent man, with a distinguished career in international Red Cross work, is well aware of the complications the League faces in developing its own distinctive patterns in the wide multidisciplinary area of mental retardation, but is confident that the time has come for this to be carried out. France and Switzerland are now also represented on the executive council. The League's Secretariat is presently located at 5 Bulstrode Street, London W1, the office of the British National Society, whose general secretary is Hon. Secretary of the League. An International Congress and League Assembly will be held in Belgium October 21-25, 1963.

Concurrent with these developments, and following the three international medical/scientific congresses held in Portland (1959), London (1960), and Vienna (1961), an international committee was established on which are representatives of the American Association on Mental Deficiency and of other professional groups and scientists in Austria, Chile, Denmark, Germany, Great Britain, Italy, Norway and Sweden. An International Congress on the Study of Mental Deficiency will be held in Copenhagen on August 7-13, 1964 at which time a formal constitution will be adopted forming an international scientific association. The question might be raised as to whether in the long run there is need to maintain two separate international organizations in the field of mental retardation, but for the present the pattern has been clearly set, and there should be opportunities for cooperation to mutual advantage.

Whatever lies in the future for the International League, there can be no doubt that its constituent members and the other associations which will later join will have to their credit major accomplishments around the globe in bringing a better world and better opportunities to the mentally retarded and their families.

Rosemary F. Dybwad, Secretary, International
Relations Committee, National Association for
Retarded Children, Inc., New York City

PITTSBURGH STUDY OF HEARING IN CHILDREN -- IMPLICATIONS FOR CASE-FINDING

Eldon L. Eagles

This study was developed as a cooperative effort between the American Academy of Ophthalmology and Otolaryngology (Subcommittee on Hearing in Children, Committee on Conservation of Hearing) and the Maternal and Child Health Section of the University of Pittsburgh's Graduate School of Public Health because of a common interest in hearing problems in children.

Since October 1956, the Subcommittee on Hearing in Children has been studying problems relating to conservation of hearing in children with the following specific aims:

1. To develop the most efficient case-finding methods and to use these methods in estimating the magnitude of the problem in the country
2. To help develop standards for medical and surgical rehabilitation
3. To use the Subcommittee's findings in assisting professional workers to improve and enhance programs for the hearing impaired

In considering these aims, it became readily apparent that a unified body of fundamental information regarding both the nature and extent of problems relating to hearing conservation in children was not available on a national basis. It was decided, therefore, to set up sufficiently broad studies to produce this information in a statistically sound fashion so that administrative and clinical guide-lines could be clearly established (American Academy of Ophthalmology and Otolaryngology, 1957).

The first move was to develop a long-term study at the University of Pittsburgh to provide normative data on hearing in children and to develop methods and techniques for the Subcommittee's national studies.

Preliminary reports of the study have been reported elsewhere (American Speech and Hearing Association, 1961; Eagles and Doerfler, 1961; Eagles and Wishik, 1961; Jordan and Eagles, 1961). The most recent report is now in preparation and will appear as a monograph entitled Hearing Sensitivity and Related Factors in Children (Eagles, Wishik, Doerfler, Melnick, and Levine).

In these latter publications, problems arising during the study and their solution are described, together with the findings of a cross-sectional analysis of data. The data analyzed are those collected on 4078 children, aged 5 through 14 years, at the time of the first concurrent reliable hearing level determinations and examinations of the ears, nose, and throat between June 1958 and August 1960. The study population, which was drawn from four public elementary schools, was adequately representative of the City of Pittsburgh population of the same age range on the basis of age and sex distributions and important socio-economic characteristics. The results of the analysis of data can be generalized for the City of Pittsburgh, but whether they apply to the country as a whole is not known at this time.

Examinations of the ears, nose, and throat were made by experienced otolaryngologists following definite rules for the conduct of the examination and the recording of findings. Consistency tests revealed considerable variation in reporting physical findings, particularly differences in degree. Inconsistency increased as the heterogeneity of ears examined increased. Disagreement among the observers was reduced, but not eliminated, by reducing the criteria for reporting physical signs and by discussion and practice in their use. The use of highly trained observers is a method of reducing variation in observations; however, equivalent training and experience do not by themselves insure consistent observations.

Air conduction hearing level measurements were made by audiometer technicians trained by the study staff. As with the otolaryngologists, it was realized that inter-and intra-observer variation might exist. Consistency tests were carried out to estimate the amount and direction of this variation. In a typical test the differences between mean hearing levels obtained by four technicians ranged from 1.3 decibels to 8.8 decibels and in all instances except two were less than 5 decibels. Differing patterns of technician performance also were revealed in consistency tests and on occasion indicated a need for review of the technique being practiced by a technician. On the basis of information obtained in consistency tests, data from the four study schools were pooled with the knowledge that the amount of variation that might exist among the different technicians was usually five decibels or less.

Hearing level measurements were made in an acoustic environment which allowed accurate testing well below audiometric zero. Although exact sound pressure levels within the audiometric test rooms could not be measured due to the limitations of sound measuring instruments, evidence strongly suggested that hearing level measurements were made to minus 30 decibels without masking. To attain this environment, it was necessary to provide double-walled audiometric test rooms and to monitor their performance by acoustic surveys. It was also necessary to locate them at sites which were relatively quiet. Single-walled audiometric test rooms were found not suitable for accurate hearing threshold measurements in children. A suitable acoustic environment is necessary for accurate hearing measurement, not only for research purposes, but also in any hearing measurement program. The type of environment needed can be obtained in the field.

Audiometers were modified by placing 40 decibel attenuators in the earphone lines in order to test with linearity to minus 30 decibels. The usual commercial audiometer is not often constructed to test with linearity much below audiometric zero. The audiometers were equipped with Western Electric 705A earphones because their threshold characteristics are known.

The audiometers purchased did not meet the American Standard Specification on delivery from the manufacturer, and it required considerable time and effort before they did.

In addition to regular monthly laboratory calibration, the performance of audiometers was monitored by daily checks by technicians and weekly measurement of voltages at earphone terminals.

A crucial problem in audiometer performance was delay in tone presentation and overshoot and undershoot of tone. This was solved by construction of a special electronic switch to control tone presentation and by alteration of the audiometer circuitry.

Other problems varied in frequency of occurrence and covered all items in the American Standard Specification. The most pressing of these problems was the tendency of the audiometers to produce variation in sound pressure output. Sound pressure output varied with audiometer, frequency, earphone, and with time. Variation also occurred in the five decibel hearing level attenuator steps and in the 40 decibel attenuators in the earphone lines but to a less marked degree than the sound pressure output.

For the research purposes of this study hearing level measurements were adjusted each month by the cumulative error from the variation in sound pressure output, the hearing level attenuator steps, and the 40 decibel attenuators.

Experience with audiometers in this study is not unique to the particular make of audiometer used. It is obvious that we have not reached the ultimate in audiometers and that audiometers are needed with improved accuracy and stability. For example, most audiometers need modification if they are to be used to test at the levels necessary for threshold audiometry in children.

Audiometers need regular complete laboratory calibration in order to meet the American Standard Specification. This implies the need for a marked increase in facilities for their calibration and maintenance. Certain types of field calibration are useful in checking audiometer performance problems not detectable by an audiometer technician, but are not a substitute for laboratory calibration.

The technique of hearing level measurement used closely resembles the Hughson-Westlake method and is modified ascending serial method of limits. For the purposes of this study, a reliable response was one made when the test procedure was followed exactly and, in the opinion of the audiometer technician, produced a response by the child consistent with the presentation of tone. Also required was that there be a properly functioning audiometer, a suitable acoustic environment, and exact adherence to technique. There was no evidence that a play technique principally used with some younger children resulted in hearing levels that were different from those found by a standard technique.

Analysis of Data

The study population was divided into otoscopically normal and otoscopically abnormal groups of children for further study because only those abnormal otolarynogological findings related to the ear appeared to be associated with variations in hearing sensitivity.

Of the 4078 children in the study population, 2891 were classed as otoscopically normal and 622 (15.2 percent) as otoscopically abnormal. In addition, there were 565 children whose ear examinations were not completed because of unsatisfactory visibility due principally to cerumen in the auditory canal.

Patterns of hearing levels revealed mean and median hearing levels more sensitive than audiometric zero with most sensitive levels at 250 c.p.s. and least sensitive levels at 6000 c.p.s. Median levels generally were about one decibel more sensitive than mean hearing levels. Variations in hearing levels among the children tested increased with each increase in frequency (Tables 1 and 2).

Approximately 75 percent of children had hearing levels more sensitive than audiometric zero, and over 50 percent more sensitive than minus five decibels (Figure 1).

Ninety-eight percent of the otoscopically normal children had hearing levels more sensitive than plus 15 decibels at 250 c.p.s. with the percentage decreasing to 94 at 8000 c.p.s. In the total study population, the corresponding percentages were 98 percent at 250 c.p.s. and 81 percent at 8000 c.p.s.

The difference between ears for grouped data, on the average, was less than one decibel.

Girls had more sensitive hearing than boys at all frequencies except 250 c.p.s. The differences, however, were not large, the greatest being two decibels at 6000 c.p.s. (Figure 2).

Differences between non-white and white children were between one and two decibels with no consistent trend noted.

There was apparent increase in sensitivity of hearing levels with age from a least sensitive point at five years to greatest sensitivity at 12 and 13 years of age. This was followed by a drop in sensitivity at 14 and 15 years of age. This trend was more marked in the lower frequencies. Girls showed greatest sensitivity earlier than boys, at 11 and 12 years, while boys had most sensitive hearing levels at 12 and 13 years. This apparent variation in hearing sensitivity with age in the group studied is receiving further investigation (Figures 3 and 4).

No consistent seasonal trend was noted in comparing hearing levels in a specified month to hearing levels in the same month at a different time in the study period. Two periods of lowered sensitivity were noted in winter months which coincided with epidemics of acute respiratory infection. Children reporting recent colds had hearing levels about two decibels less sensitive than those not reporting a cold.

Otoscopic Abnormalities

Six hundred and twenty-two children, or 15.2 percent of the study population, were classed as otoscopically abnormal and placed in diagnostic categories after a complete examination of all data on them. Twenty percent of the otoscopically abnormal children (three percent of the study population) exhibited signs indicative of disease as follows: perforation of the tympanic membrane with and without discharge, chronic serous otitis media, acute otitis media, and early inflammation of the tympanic membrane. The remaining children who were otoscopically abnormal (12 percent of the study population) had findings suggesting past disease, such as retraction and scarring of the eardrum.

Approximately 22 percent of the otoscopically abnormal children had the same abnormality reported in both ears; 18 percent had a different abnormality in each ear; and the remaining 60 percent had one ear with an abnormality and the other ear normal.

All categories of otoscopically abnormal ears showed, on the average, significantly less sensitive hearing levels as compared with otoscopically normal children. Degrees of less sensitive hearing were greatest in children with findings indicating acute and chronic disease and were less in children with signs of healed or past disease such as retraction and scarring of the tympanic membrane. When both ears had abnormal findings, hearing levels were generally less sensitive than they were when only one ear was reported as abnormal with the other ear normal. However, despite the less sensitive average hearing levels in children with otoscopic abnormalities, many of them had as sensitive hearing as children who were classed as otoscopically normal.

There is a clear indication of the need for accurate hearing level measurement in children well below the American Standard Audiometric Zero if full use is to be made of audiometry in the medical care of children. Only by such accuracy can threshold shifts be identified and appropriate measures taken before the stage of hearing impairment for speech is reached.

It has been assumed in the past that conventional audiometric screening will reveal not only those children with "hearing loss" but also those with ear conditions needing medical care. The Pittsburgh data indicates that audiometric testing, however complete it may be, cannot identify all children with physical abnormalities which may have predictive value or who may need medical treatment. For example, in Figure 5, the percentage of ears with chronic serous otitis media which would fail to be identified at a screening level of plus 20 decibels is seen to be over 80 percent, while even a screening level of five decibels would fail to identify over 50 percent. In Figure 6, nearly 60 percent of ears with perforation would be missed by a screening level of plus 20 decibels and 40 percent at plus five decibels.

It is concluded that in addition to failing an audiometric screening procedure, some other means is needed to identify children needing special otological and audiological attention. Events in the medical histories of children can help in this identification. For example, a history of earaches and ear discharge, especially when accompanied by otoscopic evidence of past or present infection, indicates a child who needs special otological and audiological services. The frequency of occurrence of these conditions appears to be a measure of the urgency of this need. The search for other signs of predictive value is being continued.

(Financial support for the study was provided from a portion of a grant (B2375) from the National Institute of Neurological Diseases and Blindness to the Subcommittee on Hearing in Children, Committee on Conservation of Hearing, of the American Academy of Ophthalmology and Otolaryngology. Additional support was provided by a grant from the U. S. Children's Bureau through the Commonwealth of Pennsylvania Department of Health to the University of Pittsburgh.)

Table 1

ARITHMETIC MEANS AND STANDARD DEVIATIONS OF HEARING LEVELS AMONG OTOSCOPICALLY NORMAL CHILDREN AGED 5-14 YEARS, CLASSIFIED BY FREQUENCY AND EAR TESTED

		Right Ear Mean Hearing Level in Decibels re			Left Ear Mean Hearing Level in Decibels re		
Frequency	Number Tested	Audiometric Zero	0.0002 dyne per sq. cm.	Standard Deviation	Audiometric Zero	0.0002 dyne per sq. cm.	Standard Deviation
250	2790	-9.0	31.6	8.1	-9.0	30.8	7.6
500	2891	-6.5	18.3	8.1	-6.8	18.0	7.7
1000	2891	-4.4	12.3	8.1	-4.5	12.2	7.8
2000	2890	-3.8	13.2	8.4	-3.8	13.2	8.5
4000	2787	-3.2	11.9	9.3	-2.6	12.5	9.2
6000	2803	-1.6	15.1	10.1	-1.0	15.7	10.3
8000	2780	-2.5	18.4	10.9	-2.6	18.3	11.1

Table 2

MEDIAN HEARING LEVELS AMONG OTOSCOPICALLY NORMAL CHILDREN AGED 5-14 YEARS, CLASSIFIED BY FREQUENCY AND EAR TESTED

		Right Ear Median Hearing Level in Decibels re		Left Ear Median Hearing Level in Decibels re	
Frequency	Number Tested	Audiometric Zero	0.0002 dyne[x] per sq. cm.	Audiometric Zero	0.0002 dyne[x] per sq. cm.
250	2790	-10.3	30.3	-10.9	29.7
500	2891	-7.3	17.5	-7.4	17.4
1000	2891	-5.7	11.0	-5.7	11.0
2000	2890	-4.8	12.2	-4.9	12.1
4000	2787	-4.4	10.7	-3.9	11.2
6000	2803	-3.3	13.4	-2.2	14.5
8000	2780	-3.5	17.4	-4.1	16.8

[x] Derived from standards for W.E. 705 earphones.

Figure 1 First, 5th, 25th, 50th, 75th, 95th, and 99th Percentiles from the distribution of hearing levels for right ears of otoscopically normal children.

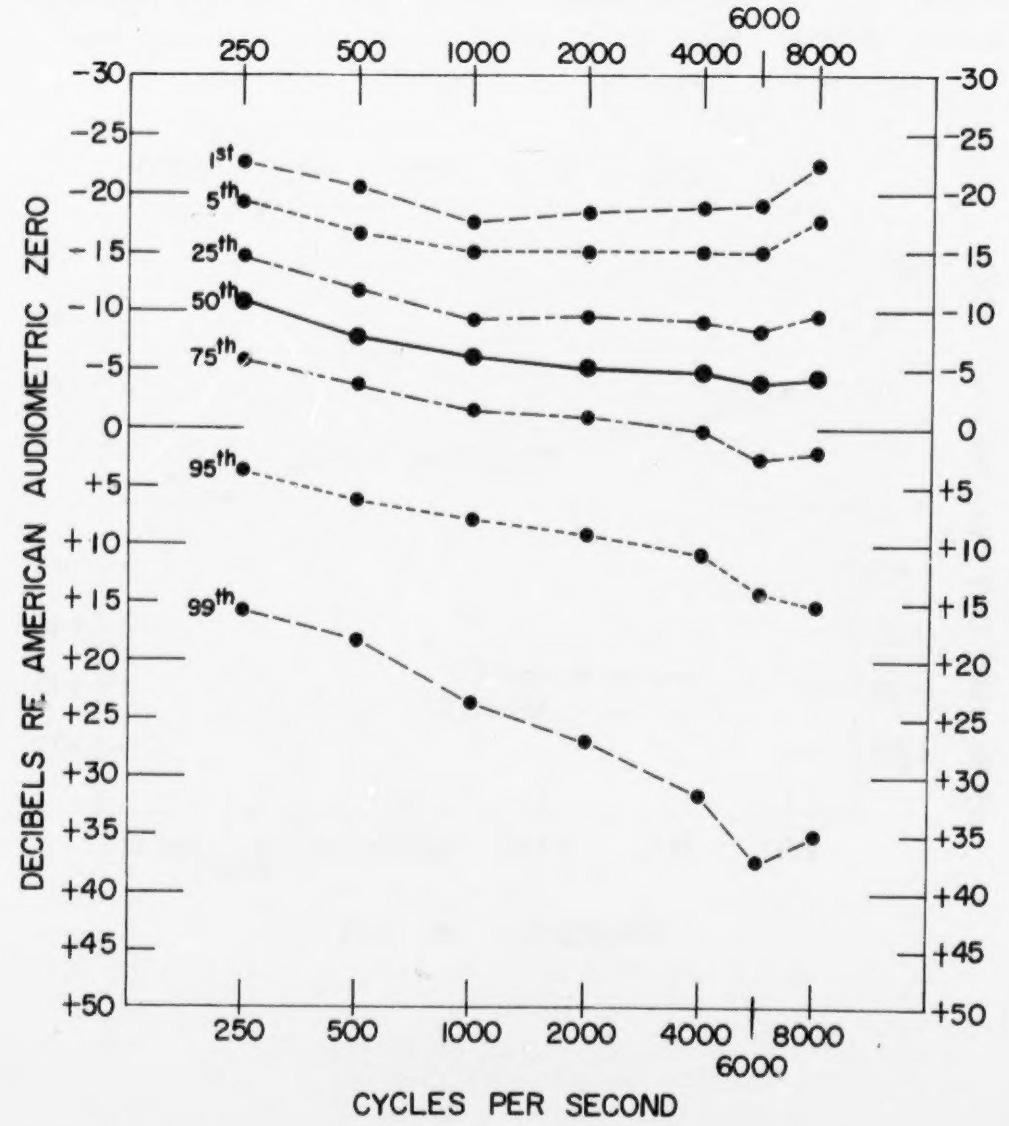


Figure 2

Figure Arithmetic mean hearing levels for the right ear among children aged 5-14 years in an otoscopically normal population classified by frequency and sex.

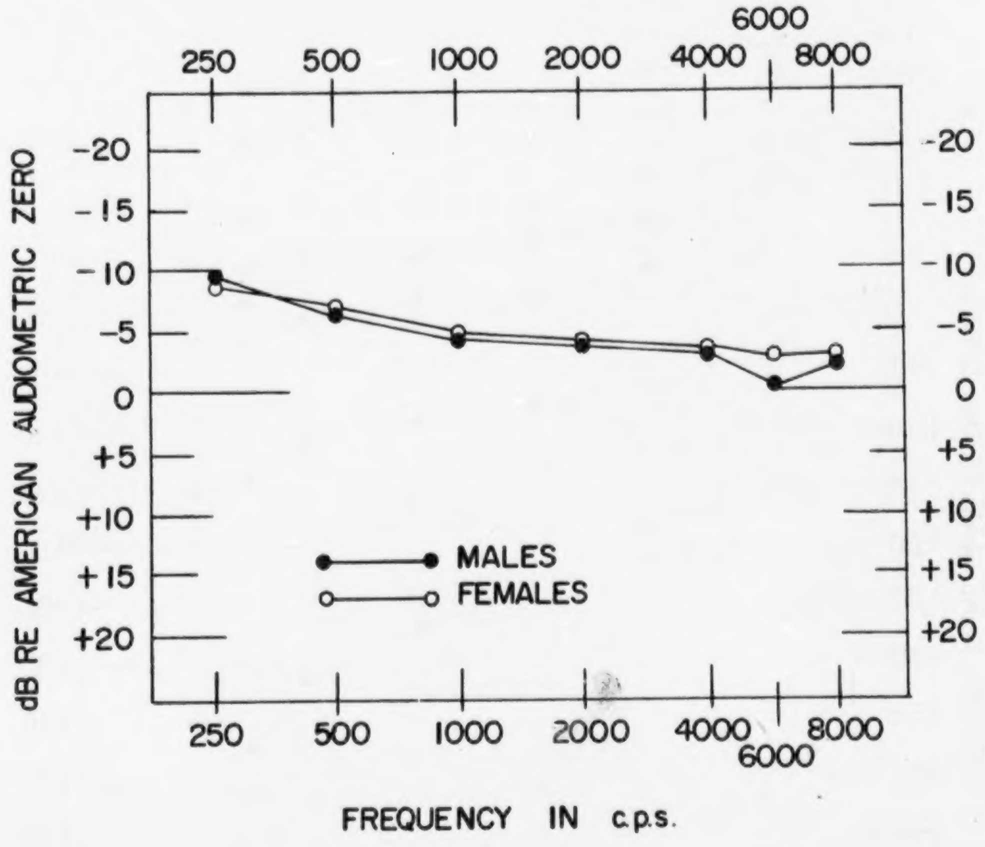


Figure 3

Arithmetic mean hearing levels for the right ear among children 5-14 years of age in an otoscopically normal population classified by age and frequency.

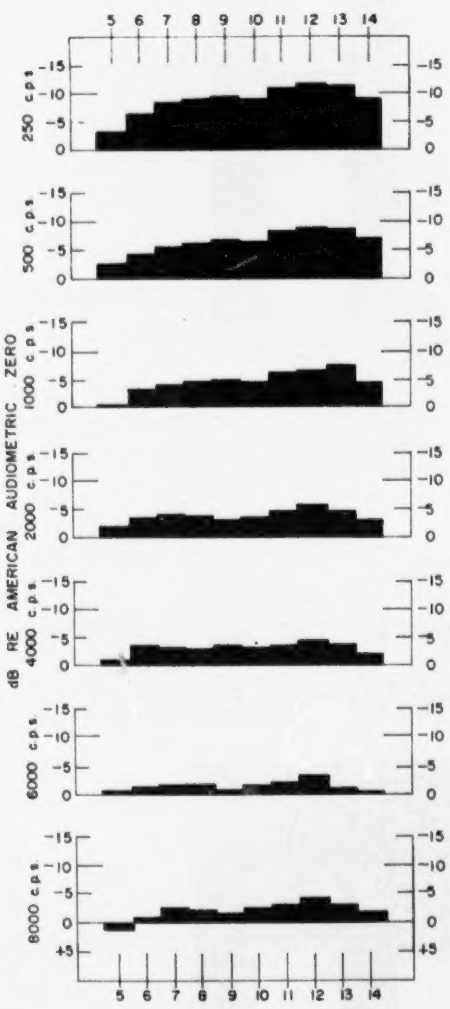


Figure 4

Arithmetic mean hearing levels for the right ear among children 5-14 years of age in an otoscopically normal population classified by freqency, age and sex.

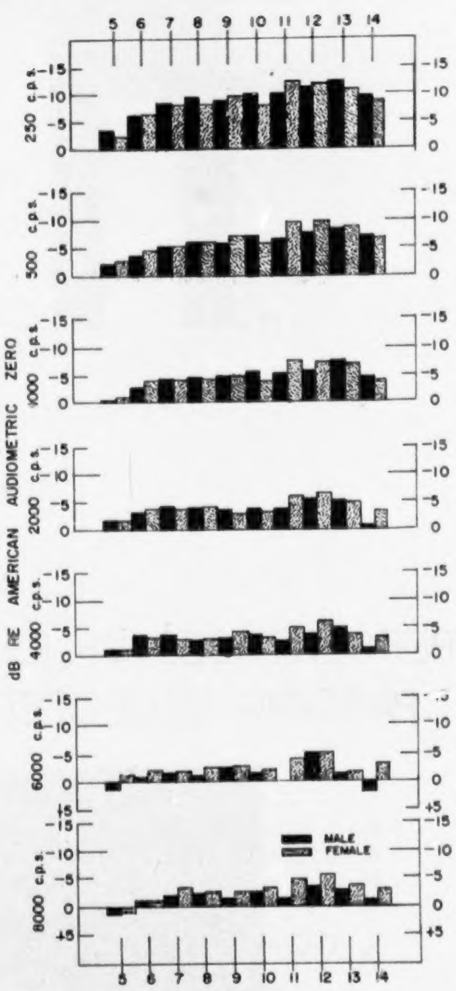


Figure 5

PERCENTAGES OF EARS WITH DISCOLORATION, IMPAIRED MOBILITY & RETRACTION OF PARS TENSA PASSING SELECTED SCREENING LEVELS

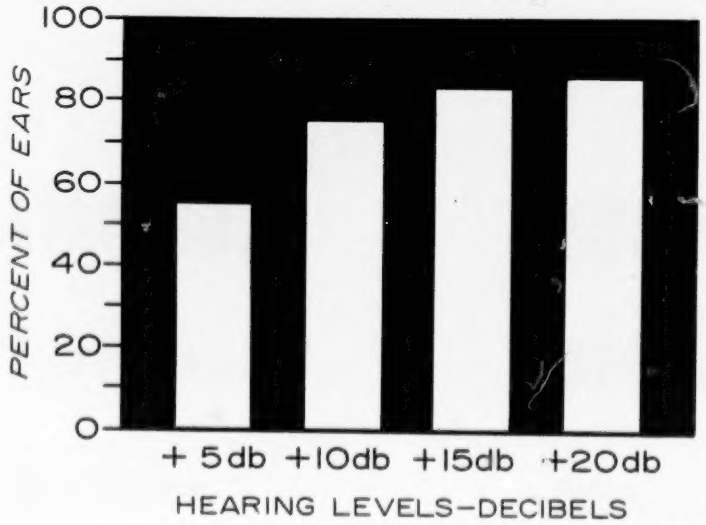
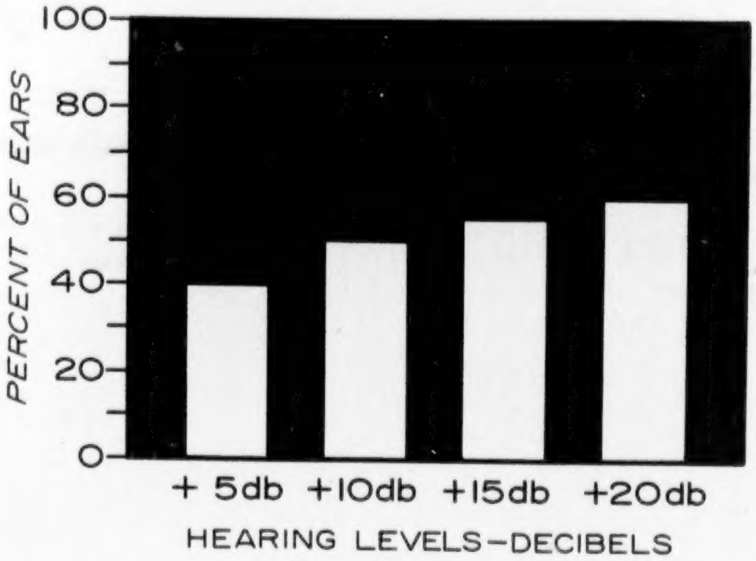


Figure 6

PERCENTAGES OF EARS WITH PERFORATION PASSING SELECTED SCREENING LEVELS



References

American Academy of Ophthalmology and Otolaryngology, Subcommittee on Hearing in Children, Jordan, R. E., Chairman. Symposium: deafness in children -- knowledge and practice. *Transactions of the American Academy of Ophthalmology and Otalaryngology*, November - December 1957.

American Speech and Hearing Association, Committee on Identification Audiometry, Hardy, W. G., Chairman. Identification audiometry. *Journal of Speech and Hearing Disorders*, 1961, Monograph Supplement No. 9.

Eagles, E. L., and Doerfler, L. G. Hearing in children: acoustic environment and auditory performance. *Journal of Speech and Hearing Research*, 1961, 4, 149-163.

Eagles, E. L. and Wishik, S. M. A study of hearing in children: objectives and preliminary findings. *Transactions of the American Academy of Ophthalmology and Otolaryngology*, May - June 1961, 260-282.

Jordan, R. E., and Eagles, E. L. The relation of air condition audiometry to otological abnormalities. *Annals of Otology, Rhinology and Laryngology*, 1961, Vol. 70, No. 3, 819-828.

Eldon L. Eagles, Executive Director, Subcommittee on Hearing in Children, Committee on Conservation of Hearing, American Academy of Ophthalmology and Otolaryngology, and Associate Research Professor of Maternal and Child Health, Graduate School of Public Health, University of Pittsburgh, Pennsylvania

GENERAL SESSION I: SOME SPECIAL ASPECTS OF UNIVERSAL EDUCATION

John H. Fischer

To speak of universal education at the opening meeting of a convention devoted to special education might be viewed as the height of irrelevance. History, at least, supports the logic of my choice, for the growth of interest in teaching exceptional children is the direct result of the effort not only to extend education to all children but to give it genuine meaning for every child. In addition to recalling what has occurred, there is good reason to consider what is happening and what should be planned for in the years ahead regarding the further development of our schools and their relation to our purposes as a people.

For some years now we have been rather self-conscious about our national purposes. Some say we have forgotten what they are, and others argue that we need new ones better adapted to the space age and the cold war. The evidence that our traditional values are obsolete is not impressive, but there is enough evidence to convince anybody that the setting in which they must be applied has changed drastically and swiftly. Yet in considering what has changed, we are wise to contemplate also what endures. The two fundamental concerns of our people are still what they have long been. The first is to assert and respect the equality of every man to every other man, under God, before the law, and among his fellows. The second is to assure every man the opportunity to attain his own individuality on the highest possible level. Equality and liberty are the twin purposes to which we are oriented by our traditions and toward which we move when we are most thoughtful, most humane, and most courageous.

We shall do well to keep these principles in mind as we respond to the pressures that now impinge upon the schools. No day passes without some new proposal being made or an old one reargued to reshape some part of the curriculum in order to perform a new task. Nor are these pressures necessarily to be rejected. Indeed, the most important of them are undeniable and irresistable, and no responsible teacher will fail to take them into account.

The rise of technology, the mobility of populations, the concentration of people in urban complexes, and the increasing closeness of cultures, economies, and political systems everywhere on earth are facts that it would be stupid and irresponsible to deny or ignore.

The question is not whether we will respond to them, but how. The popular view -- and a reasonable one -- is that the school must respond by giving greater attention to intellectual development. We are reminded daily that the unemployment problem is due chiefly to the inability of uneducated workers to perform the only jobs that are available in automated industry. We face the imperative requirements to find better ways to teach children whom heretofore we have not even thought it necessary to keep in school. The news stories dramatize the urgency of teaching more acceptable behavior to adolescents who seriously disturb the peace and often the safety of their communities. The issue for school people is whether we shall respond to these problems in ways that are merely expedient or whether we shall be as much concerned about the wisdom of long term strategy as we are about the day-to-day tactics of educational reform.

The central question every teacher and administrator must face is this: what qualities and capabilities in students are so important to the students themselves and to society that uncovering, encouraging, and developing them should become the school's main business? The question may be approached from at least two points of view. One may ask what the world requires of its youth or what possibilities young people possess that are in themselves worth cultivating.

Consider the first query -- what must young people be prepared to do? For all the nonsense that has been uttered on many sides of the controversy, every young person must, if you will pardon the expression, be adjusted to life. If he is not so adjusted to at least some minimum extent, whatever else he becomes, he will scarcely be fit to live with. Those who claim that this way lies a generation of bland and stupid organization types assume that the matter must be carried to the absurd extreme. To insist that preparing the child for a reasonably harmonious life among other human beings is exclusively the business of the home is to underestimate what is required and to overstate what many homes can do. Much of what is needed must be done by the school.

To cite an unquestioned function of the school, we teach children to read because in modern culture illiteracy is not only a personal handicap but a social, political, and economic liability. Similarly, we teach the number system and other aspects of the cultural heritage because knowing these things is prerequisite to taking part in even the most ordinary affairs of modern communities. Every one of us must conform to certain imperatives which membership in society imposes upon us. We must, therefore, acquire the knowledge and the skills which these imperatives imply.

The school's obligation to teach the tools of learning and communication is scarcely new, but the minimum level of proficiency with which a young adult may hope to take part in the world's affairs -- to get a job, for instance -- is constantly rising. When Thomas Jefferson proposed a system of universal education for the State of Virginia, he had in mind schooling free to all for only the first three grades and even that much was not to be compulsory. Jefferson's proposal was made for a different world. In a recent article on the educational aspects of the technological revolution, Peter Drucker wrote, "A society in which automation has become a governing concept of production and distribution is, of necessity, an educated society . . . a society in which knowledge, rather than man's animal energy, is the central resource."

A second great force with which the school is necessarily involved is the ideological contest which now engages so much of our attention and of our productive capacity. We shall not respond usefully to this situation if we limit our efforts to teaching young people to hate communism or to fear it. If they are to vote intelligently or to participate responsibly as citizens at home or abroad, our young men and women must have more than vaguely patriotic sentiments toward America and frightened suspicion of all who differ with us. They must possess clear and reliable knowledge about other types of government and of the conditions that influence the political actions of other countries. But knowledge alone will not be enough, for the decisions our young people make will be based not only on what they know but on what they believe and what they believe in. The school has the obligation, therefore, to provide the kind of teaching that, without indoctrinating young people in a predetermined ideology, will bring them toward maturity prepared to make important judgments and to undertake commitments on their own.

Yet a third force which the school must take into account is the rising level of expectations that is now so widely visible. In calling this a world-wide phenomenon we should not overlook its appearance and importance at home. The American dream of equal opportunity and personal fulfillment is the very basis of our conception of the common school. To encourage young people to believe in themselves and to reach for the stars is not too difficult for a good teacher. Neither is it too difficult to set standards and require that they be met. What adds enormously to the teacher's task is to attempt both at once: to kindle hope and aspiration in a student, especially one who has not earlier been blessed with much reason to hope, and simultaneously to give him a sense of excellence and a realistic scale of values. But this is precisely the task American teachers now face. We must be willing and ready to accept it and perform it with charity, with artistry, and with wisdom.

Much of the recent insistence on evaluating schools objectively and on reforming the curriculum centers on the requirements the world now imposes on young people. The demands for more rigorous examination systems, for higher standards for high school graduation and college admission, for more emphasis on the "solid" subjects, all reflect the growing concern that neither young people nor the schools have been responding as they should to the needs of the time, of their country, and of the world.

But let us turn now to consider the second question I posed: what possibilities do young people possess that are worth encouraging and cultivating? In replying to this query we must rise above the level of expediency and go beyond what is necessary to defend or maintain ourselves. Here we deal not with efficiency but with excellence and return to the philosophical and spiritual fundamentals upon which our society is constructed. Here we begin to address ourselves to the real meaning of life, liberty, and the pursuit of happiness.

In responding to the compelling pressure to do what we must to safeguard our security, we may overlook the peculiar obligation of the scholar and the teacher to keep alive and to improve those elements of our civilization that are most worth securing. To define the defense of the nation and its strength in the language of physical survival is to confuse means with ends and to neglect our purposes in preoccupation with our current problems. This means, to be quite practical, that we must look at the curriculum, at the points of emphasis within curricula, at the sanctions we employ in dealing with students, and at the total context of the school and ask how wisely and how well we are serving for the long run the interests of our country and the welfare of our children.

We must ask, for example, whether we are giving suitable attention to the critical understanding of the place of values in personal and social affairs. It is the school's proper business to see that its graduates are prepared to live intelligently, worthily, and responsibly among their fellow men -- that they are equipped to contribute more to the solution than to the creation of social problems. If the school is to do this, it must come to grips with questions of excellence and taste, of rights and responsibilities, of independence and compliance, of freedom and duty. Because we are preparing our students for life in a free society, we must help them to build the personal resources to make decisions and undertake commitments for themselves and on their own. The school cannot expect to do all of this alone, for the home and other institutions have important parts to play, but the school must do a substantial part of the work. Indeed, for many students the school will be the principal, and sometimes the only, source of whatever guidance they receive on such matters. If it is to deal with values effectively, the school cannot retreat into academic isolation, but neither, as I shall argue presently, can it ignore the building of scholarly competence. Beyond the formal types of learning, however, situations should be provided in which every student may engage in making value judgments, choosing between alternate courses of action, practicing the voluntary acceptance of a difficult duty, and learning the difference between private advantage and the public interest. To achieve education of this kind, the school must give active attention to the individual possibilities for such development and must undertake their deliberate cultivation in every student.

The school must look for imagination in young people -- foster it, nurture it, encourage it in all the ways we customarily encourage attributes we call desirable. Beyond the sentimental notion that imagination is a charming child-like quality to be smiled upon benignly stands the clear evidence that imagination is essential to the full flowering of humanity and to the advancement of creative effort or serious criticism.

As Earl S. Johnson reminds us: "... without imagination there could be no intimation of 'something better,' in which plight the concept of morality would be impossible and meaningless ..."

There are those who, driven by the desire to be objective and to teach objectively, strain hard for the facts and nothing but the facts. These people misunderstand not only the nature and the importance of imagination -- they misunderstand also the place and the use of facts. As Archibald MacLeish has put it, "There exists in our society the strange and ignorant belief that the life of the imagination lies at an opposite pole from the life of the inquiring mind ... that men can live and know and master their experience of this darkling earth by accumulating information and nothing more. Men who believe that have, in effect, surrendered their responsibilities as men."

Closely aligned with a proper respect for imagination is concern for the creative capacities. Now, there is hardly another word in the lexicon of school people that has been more loosely used or more grievously misused than the word "creative." Creativity is something other than the erratic trail of a paint-smudged palm or the verses of a budding "poet" who can't quite cope with rhyme and meter. The good teacher, who is always also a perceptive critic, knows that to be creative calls for more than action without restraint or discipline. But if in schools we are truly to cultivate creativity, we can begin by being prepared for difference and by being hospitable to it when we find it. Whatever is newly created is necessarily different, not simply in amount, but most importantly in character. It therefore follows that those aspects of a school's program which stimulate the creative, or those parts of a student's work which best reveal it are not likely to be distinguished by objective measures designed to gauge quantitative differences in standard qualities. The essence of creativity is that it is nonconforming, not standardized. Important though it is to know how schools and students "measure up" in those characteristics in which all of us are and should be more or less alike, it is equally important to encourage, even though we cannot directly measure or compare them, the ways in which human beings may become more nearly unique, more completely themselves.

The lack of adequate attention to the creative capacities of students is due mainly to unconscious oversight or the difficulty of recognizing creativity when we see it. But another quality that should be cultivated in schools is often neglected now because it seems less worthy of attention than it once did. I am speaking here of the ability to work with concrete materials, to conceive and fashion things, in contrast to ideas expressed in words. The first president of Teachers College, Nicholas Murray Butler, called attention to the importance of this segment of education in a philosophical essay he wrote in 1888. "Reading and writing," he said, "even when well taught, are not adequate to the demands of the mental powers for expression ... The boy who can draw a cube or he who can carve or mold one from wood or clay knows more that is worth knowing about the cube than he who can merely repeat its definition." We can profit from a review of the history of the manual training movement, but the argument for education that honors more than verbal ability is supportable also on other grounds today.

In the graphic and the plastic arts, in a vast range of industrial technologies, in constructing scientific equipment, in making musical instruments, nothing is ultimately possible except as the prototype or the finished product is fashioned by the hand of a skilled and perceptive craftsman. Yet in few schools can one find evidence that the place of such skills in our culture is known or appreciated. Still less are they encouraged or excellence in their practice honored.

By a curious sort of irony, although our society depends in countless ways for its material and esthetic advancement on the skills of its craftsmen, we insist on derogating their work to the younger generation. The question is not whether pattern making or pottery should be taught in school or later, but whether we shall try to identify in school the talents that are basic to the expert pattern maker and the master potter. Unless the qualities that lead to craftmanship are sought out and cultivated in their early stages, unless the work to which they can be devoted is appropriately honored by those whose judgment children respect, there can be little hope for the future of these crafts, or for the survival of interest in them.

Part of the difficulty in this matter arises from the false antithesis that is suggested when intellectual and other purposes are said to be opposed in education. They are naturally opposed neither in school nor in the world at large. The astronomer is no more the enemy of the lens grinder than the poet is of the printer. In the community and within the person, the capacity to work with tangible materials can profitably complement the ability to work with ideas. In many forms of artistry the two are inseparably integrated. The good school takes account of this connection and reflects it faithfully.

Another group of abilities with which the school should be actively concerned are those in the realm of human relationships. Many of the recent criticisms of education and proposals for improving it overlook the basic fact that man fulfills his humanity in association with other human beings. Little attention is directed to the idea that all learning has social, ethical, and moral implications. On the lists of the functions schools should serve, too rarely do we add the deliberate cultivation of the qualities required for leadership, for cooperation, for empathy and sympathy, for eliciting confidence and respecting it. Now it can be argued, and often is, that these qualities have no bearing on scholarship and that the school wastes its time in trying to discover or develop them. Even those who offer the argument must recognize how far it departs from common sense and from the purposes of the best schools.

Pupils are destined not only to be scientists, journalists, machine operators, or computer programmers; they will also be fathers and mothers, supervisors and workmen, members and officers of unions, aldermen in their communities and vestrymen in their churches. They will engage for better or for worse in human relationships of many kinds, and in those relationships they will use not only the facts they have learned and the abstract principles they have mastered but whatever talent they have for relating their personal interests to those of their contemporaries. If the school is genuinely to accept responsibility to help a student communicate effectively, it must take into account all of the elements that make communication effective, and these include much more than technical skill in the use of language.

If one insists, as I have been doing, that the school has an obligation to be interested in many facets of a child's development, to be attentive to a wide variety of talents, to encourage many more kinds of ability than those we ordinarily measure in aptitude and achievement tests, does it then follow that intellectual development should be considered less important? By no means does this follow. On the contrary, I do not see how any of the things I have been talking about could possibly be opposed to intellectual growth or weaken it in any way. Attention to values, the deliberate cultivation of imagination, the systematic nurture of creativity, developing the ability to fashion material things, careful consideration for the skills of human relationships -- all supplement intellectual strength.

Putting it another way and using the language of the Educational Policies Commission, "The rational powers are central to all the other qualities of the human spirit. These powers flourish in a humane and morally responsible context and contribute to the entire personality. The rational powers are to the entire human spirit as the hub is to the wheel. A person with developed rational powers has the means to be aware of all facets of his existence. In this sense he can live to the fullest." It seems to me absurd to argue that in our complex and diversified society a school could have a single purpose. But as the school pursues its other purposes, each of them is certain to be better served as the student learns to apply his mind with efficiency, with imagination, with feeling, with responsibility to whatever task he undertakes. The problem here, as in so many other important fields of human endeavor, is to achieve wise and sound balance. The either-or view is no more appropriate or promising in planning a curriculum than it is in reconciling in the larger world the conflict between the scientific and the humanistic approaches to learning.

Earl Johnson, whom I cited earlier, called attention in that same paper to "the full continuum of man's concerns" and the "symbol systems man has elaborated as media for meeting his world and coming to terms with it." The sciences, he reminds us, give us understanding, and the humanistic studies, appreciation. We need both -- and in the schools we must use them in a broad context. When we speak of intellectual development and its place in schools we must take care not to define either the intellect or its development in constricting ways.

Professor Lionel Trilling, of our own university, describes the hazard this way, "It is a truism of contemporary thought that the whole nature of man stands in danger of being brutalized by the intellect, or at least by some one of its apparently accredited surrogates. A spectre haunts our culture -- it is that people will eventually be unable to say 'they fell in love and married,' let alone understand the language of Romeo and Juliet; but will, as a matter of course, say 'their libidinal impulses being reciprocal, they activated their individual erotic drives and integrated them within the same frame of reference.' " Trilling then adds, "Now this is not the language of abstract thought or any kind of thought; it is the language of nonthought. But it is the language which is developing from the peculiar status we in our culture have given to abstract thought. There can be no doubt that it constitutes a threat to the emotions and thus, to life itself."

Those who are most intelligently aware of the need for genuine intellectual development among young people are not carried away by advice that contains more enthusiasm than wisdom. Whatever may be the merits of the argument against the merely well-rounded personality as an educational goal, they should not be confused with the advantages of the well-furnished mind. Such a mind, we may remember, is neither narrow nor simple, nor will it be developed by a curriculum conceived in expediency and taught by imitation.

At the beginning I said that I intended to deal more with the general question of universal education than with particular tasks of special education. It should be noted, however, that some aspects of your work present both unusual difficulties and unusual opportunities for attaining the common goals all schools share.

Even more than most teachers, those who teach exceptional children are concerned with individual differences, often the differences imposed by physical, mental, or emotional handicaps. You must maintain a constant regard for the special situation of each pupil and adapt your teaching to his limitations as well as his possibilities. And it is precisely from this dual emphasis that is characteristic of your field that every teacher can learn a principle essential in all teaching. As special education has progressed from its earlier concentration upon the charitable acceptance of weakness to its present emphasis on each student's combination of strengths, you have helped all who teach to see the importance of releasing the potentiality of a student rather than merely verifying his limitations. The truth of the matter is that we know very little about the heights to which human beings can rise or the conditions that best encourage effort and growth. To impose ceilings of our own contrivance upon any child, either overtly or by implication, is not only unjust to the child but quite likely to reveal in time our own arrogant ignorance.

The current confusion about excellence and standards can lead -- and already has led some -- into the errors Lyman Bryson had in mind when he spoke of those who "do not respect excellence but only excellent persons." "Better men," he went on, "are happy to find excellence in any kind of man. They are not surprised to find it anywhere."

You who work with children whose needs are greater or more seriously different offer constant reminders of what good teaching can do. You demonstrate daily the benefits that can come to individuals and to society when teaching procedures are thoughtfully planned and educational facilities deliberately designed to uncover possibilities, to compensate for weaknesses and to build on strengths. In a very real sense, you are concerned with the fundamentals of education. You respect the inherent moral and personal equality of your students as you encourage them in the liberating experiences of learning and growth.

I wish you well in your efforts to advance even further the splendid progress you have made, for your success is a stimulus and a guide to every other teacher.

John H. Fischer, President, Teachers
College, Columbia University, New York City

CURRENT DEVELOPMENTS IN RESEARCH ON THE COMPREHENSION OF RAPID SPEECH

Emerson Foulke

Speech compression is any process by means of which the time normally required for a spoken message may be shortened. We are all familiar with the speech compression that results when a phonograph record containing speech is played at a speed faster than that at which it was recorded. More will be said later about this kind of speech compression.

In 1954 Dr. Grant Fairbanks described a method of accomplishing speech compression which avoids the distortion in pitch and voice quality that results when records are speeded. Research reported by Fairbanks, Gutman and Myron (1957) indicated good comprehension at very fast word rates when speech was compressed in this manner. Because oral communication at normal speaking rates and especially communication by means of Braille are so slow when compared to silent visual reading, blind children must contend with a considerable communication handicap in the course of their education. The findings of Fairbanks et al. suggested that the rapid speech made possible by this new approach might provide a partial solution to the communication problems of blind readers.

In September 1962 with funds made available by the Cooperative Research Branch of the U. S. Office of Education, Department of Health, Education and Welfare, the University of Louisville and the American Printing House for the Blind undertook jointly an exploratory investigation to determine the feasibility of this technique.

This research was reported in Exceptional Children (Foulke et al., 1962). Briefly, a two-factor experiment was performed in which word rate was varied in four ways and reading difficulty was varied in two ways. As expected, the outcome showed both word rate and reading difficulty to be significant and interacting variables. The important finding was that blind children from the sixth, seventh, and eighth grades, without previous experience in listening to rapid speech, showed very good comprehension of material presented at 275 words per minute. This word rate is slightly higher than the mean silent visual reading rate for high school seniors reported by Ethington (1956). Though comprehension began to fall off rapidly beyond this point, there was still some evidence of comprehension at 375 words per minute.

The research accomplished during this year could best be characterized as pilot work. In order to permit a more careful examination of the factors related to the comprehension of rapid speech, the Cooperative Research Branch provided support for two additional years. Our major objective during this period has been to propose and evaluate procedures for training blind children to comprehend very rapid speech. In order to do this, we have spent the first year gaining experience in listening to rapid speech. We have prepared a variety of materials covering a wide range of interests and difficulty. We have listened to these selections at rates ranging from the normal speaking rate to rates so fast that they are almost unintelligible. We have manipulated practice conditions and schedules in a variety of ways.

Using this experience, we have formulated several training procedures that we are in the process of evaluating. The training procedures are to be administered to groups of blind children. Upon completion of training, each group will listen, at 375 words per minute, to a specially chosen test selection for which a test of known and high reliability has been written. The test performance of groups receiving the different training experiences will be compared statistically in order to gauge the relative effectiveness of the different approaches.

Though results of this investigation are not yet available, our own experience convinces us that listeners can, with relatively little practice, understand speech presented at a rate of 350 words per minute. It is hoped, of course, that appropriate training will enable listeners to comprehend speech at even faster rates.

During this time we have also conducted several other studies. In one of these, Miss Julie McLain, a psychology student at the University of Louisville, investigated the comprehension resulting from the two available methods for accomplishing speech compression. One method was the playing of a record at a faster speed than that at which it was recorded. This method produces severe distortion in pitch and voice quality; however, it does have the advantage that it can be accomplished with readily available and relatively inexpensive equipment. The other method, the one that we have been evaluating, is the sampling method described by Fairbanks. In this method small segments of tape-recorded speech are periodically discarded, and the resulting gaps are eliminated. This method depends for its success upon the fact that the discarded segments are so small the human ear cannot detect their absence. The result of this method is speech that is clear and undistorted. With this method, a listener can identify the voice of a familiar reader, even when the word rate at which the voice is reproduced is so fast as to be unintelligible. The difficulty with the sampling method is that the equipment it requires is quite expensive and almost unavailable. For these reasons, we felt that definite evidence for the superiority of the sampling method was needed. We therefore performed an experiment in which comprehension of a listening selection made rapid by increasing the speed of a phonograph record was compared with the comprehension of the same selection made rapid by the sampling method. The comparison was made at two accelerated word rates: 253 words per minute, and 325 words per minute. The rate of 253 words per minute was chosen because it is a good approximation of the word rate that results when 33 1/3 rpm records are played at 45 rpm. Talking book records are recorded at 33 1/3 rpm, and many blind readers play them at 45 rpm in order to reduce listening time. The rate of 325 words per minute was chosen because our previous research indicated this to be the word rate at which comprehension begins to fall off when the sampling method for producing rapid speech is used. We felt that the use of this word rate would provide a good test for the two methods. Some of the data from this experiment was reported by Miss McLain (1962). ----
At 253 words per minute the mean comprehension score for those who heard the selection

made rapid by the sampling method was slightly higher than the mean comprehension for those who heard the selection made rapid by the alternative method. The difference, however, was not statistically significant. At 325 words per minute the difference in favor of the sampling method was larger and was significant at the five percent level. We are now preparing a similar experiment in which blind school children will serve as subjects and in which more experimental treatments will be provided. The comprehension resulting from the two methods will be compared at 253, 300, and 350 words per minute. Our experience indicates that listening tasks such as these appear to be more interesting to blind children. They seem to be more motivated during the experiment, and where comparisons have been possible, their mean test scores have been somewhat higher than the mean test scores for comparable groups of sighted children. With these changes in the experiment, we should be able to draw more definite conclusions regarding the relative merits of the two methods.

Another question that has been raised repeatedly in connection with the comprehension of rapid speech relates to its retention. It has been suggested that, although the testing of immediate recall may yield promising results, it is the comprehension remaining after long retention intervals that matters.

In order to study this problem, a factorial experiment has been conducted in which the comprehension of a listening selection was measured immediately, after seven days, and after thirty days. The selection was presented at 175 words per minute, 225 words per minute, and 325 words per minute. There was a significant loss in comprehension as a function of both word rate and retention interval. At the fastest word rate and the longest retention interval, some comprehension remained. As in previous studies, the subjects were naive. That is, they had never previously heard speech made rapid by the sampling method. There was a smaller decrease in comprehension as a function of retention interval for fast word rates than for slow word rates. The interaction was significant at the one percent level. However, this effect was probably attributable to the fact that, at fast word rates, less was learned initially. This experiment will be reported in greater detail in a subsequent paper.

In our work with rapid speech, we have noticed that the voice quality of a reader and his reading style appear to be important factors in its comprehension. Clear, crisp voices seem to fare better than soft voices, and selections read at very even rates bear up better under high amounts of compression than selections in which there are frequent pauses and changes in rate. To study this problem, we have had a selection read by three professional readers, two male and one female. Though all three are quite competent, their voice qualities and reading styles are markedly different. We will perform a factorial experiment involving nine groups of college students. Each of the three test selections will be presented at three word rates: normal, 275 words per minute, and 350 words per minute. This experiment should help us to determine the effect of the reader on listening comprehension and to test for a possible interaction between the reader and the word rate at which a selection is reproduced.

Another possibility for producing very rapid speech involves a combination of the two available methods. When a record of a listening selection is played at a speed that is only moderately faster than the speed at which the record was recorded originally, there is an increase in word rate without the severe distortion that occurs at faster play-back speeds. An example would be the increase in word rate that results when a 33 1/3 rpm record is played at 45 rpm. If, on such a record, the original word rate had been 175 words per minute, the new word rate would be 253 words per minute. A selection reproduced in this manner might be copied onto tape. This tape could then be reproduced on the tempo-regulator, the device that we have been using in our studies of speech compression. The tempo-regulator could be adjusted to produce a moderate amount of speech compression. In this way, both pieces of equipment would be operating in the range in which their performance is best and the result would be a highly compressed or shortened selection without some of the distortion that results at extreme compressions.

The cortex is able to process information that is fed to it at a very rapid rate, when the input is visual. A few people can read, with good comprehension, at rates well beyond 1000 words per minute. Many people can read at 500 to 600 words per minute. The ear is an extremely sensitive instrument, responding to incredibly small amounts of energy and of energy change. It, too, should be capable of supplying information to the cortex in such a way that it could be processed rapidly. Yet, present findings indicate that when the input is auditory, comprehension begins to fall off rapidly beyond 275 words per minute. Beyond 400 words per minute, listening selections become almost completely unintelligible. Apparently, we have not found the right way to stimulate the ear. That is, we have not yet learned to prepare the kind of auditory input that takes full advantage of the sensing capabilities of the ear. We are now conducting research that may lead to a better understanding of this problem.

When speech is compressed by means of the sampling method, the resulting loss in comprehension can be attributed to at least two obvious factors. These are the increase in word rate and the periodic discarding of segments of the message. In order to gain some notion of the relative importance of these factors, an experiment was performed by Miss Sara Winges (1963), a student in the Department of Psychology at the University of Louisville. She held word rate constant at a normal rate and varied the length of message segments that were discarded. She found that when seventy-five percent of the message had been discarded in this way, there was only a small loss in comprehension. With the equipment available at the time, it was not possible to discard larger amounts without producing an unusable signal-to-noise ratio. However, her results suggest that even larger amounts of a message might be discarded without substantial losses in comprehension. We plan to pursue this issue further. Her study, though limited in scope, does indicate rather clearly that, with respect to the amount of speech compression with which we have been concerned in our investigations, the discarding of information is not the factor of primary importance. Other kinds of message distortion, such as changes in pitch, are apparently more serious.

We hope in the near future to conduct a study to determine the differential effect of speech compression by the sampling method on the various sounds that occur in our language. With this information, we may be able to record material in which the recording curve has been so shaped that there will be at least partial compensation for the alterations produced by the sampling method. Readers might even be trained to emphasize or de-emphasize certain sounds in a way that would compensate partially for the changes produced by the sampling method.

An area in which there is a clear need for a good deal of developmental work is the technology of speech compression. At present, the best way of achieving rapid speech appears to be the sampling method. However, as already mentioned, the equipment needed to sample recorded tapes is scarce and expensive. This equipment employs an electromechanical principle. Although these devices can benefit by further engineering, there are certain problems inherent in this approach that would be very difficult to overcome. A significant technicological advance would be a means of accomplishing rapid speech electronically.

The question of the relation of reading difficulty and word rate has only been touched upon. Our findings indicate an interaction between these variables. However. the task of determining the most effective word rate for materials at various interest and difficulty levels has not yet been attempted. Before this line of inquiry can be pursued, more work will have to be done on the problem of ordering listening selections with respect to interest and difficulty. Although some research on this problem has been reported in the literature, the undertaking is a formidable one.

We also need to examine the ways in which compressed speech might be used in conjunction with other modes of presentation. Dr. Ray Bixler, University of Louisville, has been interested in the possibility of presenting information originally learned in conventional ways at very accelerated word rates for review purposes. Because the listener would already be familiar with such material, it could be presented at a word rate that would be unintelligible otherwise. A person reviewing in this manner would be exposed to the total content of the selection reviewed. Ordinarily, when readers review, they skip much of the content.

Speech that is accerlerated in steps so small that they cannot be detected by the human ear might be used to pace slow readers. In such a scheme, the slow reader would listen to the same material that he was reading visually. Initially, the aural word rate would be matched to his visual reading rate. However, as time passed, he would have to read faster and faster in order to keep up with the aural presentation. In this way, he would be led gradually to encounter written characters at a much faster rate than the one to which he was accustomed. This kind of practice might help him to develop some of the perceptual abilities that he lacks. If this method has any merit, it may prove even more useful in training Braille readers, who, as a group, read at comparatively slow rates. There is already some informal evidence suggesting that when Braille readers, by means of some pacing device, are forced to encounter Braille characters at a faster rate than the one to which they are accustomed, there is an increase in reading rate that transfers to normal reading situations.

This is by no means a complete list of the questions that arise in connection with the comprehension of rapid speech. However, it should serve to indicate the direction of our research for the present and the near future. We do not yet know very much about most of the variables that affect the comprehension of rapid speech. However, we have demonstrated that, with little or no practice, people can receive and comprehend material presented at word rates considerably in excess of the rates that they experience normally. In terms of practical application, we now feel fairly sure that blind children can make good use of material presented at a rate fast enough to reduce substantially the communication handicap they usually experience.

Our goal is to achieve aural communication at a rate comparable to the communication rate enjoyed by superior silent visual readers.

References

Ethington, Doris. The readabilityof Braille as a function of three spacing variables. Unpublished master's thesis, University of Kentucky, 1956.

Fairbanks, G., Everitt, W.H., and Jaeger, R.P. Method for time or frequency compression-expansion of speech. Transactions: Institute of Radio Engineers, Professional Group on Acoustics, 1954.

Fairbanks, G., Guttman, N., and Myron, M. Effects of time compression upon the comprehension of connected speech. Journal of Speech and Hearing Disorders, 1957, 22, 10-19.

Foulke, E., Amster, C., Nolan, C., and Bixler, R. The comprehension of rapid speech by the blind. Exceptional Child., 1962, 29, 134-141.

McLain, J. A comparison of two methods of producing rapid speech. Inter. J. for Educ. of the Blind, 1962, 12, 40-43.

Winges, Sara. The intelligibility of interrupted speech. Unpublished senior thesis, University of Louisville, 1963.

Emerson Foulke, Assistant Professor of
Psychology, University of Louisville, Kentucky

NEW FRONTIERS IN EDUCATIONAL TELEVISION

Martha Gable

The intellectual leaders of our time have stated repeatedly that the total body of knowledge known to man has doubled in the last ten years and will continue to double during each decade. In this era of scientific and technological magic, many tend to accept this prediction without fully comprehending its import. But to us -- the educators, who are responsible for equipping the young people in our schools to live successfully in the decades ahead and for developing the great leadership potential which will shape the destiny of our society -- the rapid breakthroughs in knowledge on many fronts present an awesome challenge. We are confronted with the never ending search of educators to find the most effective processes for teaching and learning. This search has led to many experiments in methodology, techniques, and teaching devices for the improvement of instruction.

Educational TV has been one of the most widely used and extensively researched of these new devices. Various patterns have evolved on the 70 educational TV stations now in operation and on a substantial number of commercial stations throughout the country. Let us examine it for a few moments to see what has been learned about it, for in my judgment it has important implications for some aspects of the education of exceptional children.

What Are the Objectives?

Instructional TV has several objectives. One is to bring to the pupils the rich resources of personnel and materials which are not ordinarily available. For instance, from historical museums, the TV teacher may secure the actual chair of Abraham Lincoln, the eyeglasses and shaving mug of George Washington, the one and only wampum belt presented to William Penn by the Indians. Scientific institutes, commercial laboratories, and universities make available fascinating materials, demonstrations, and findings which are not yet in textbooks. Two weeks ago when the science teachers had their convention in Philadelphia, we asked Mr. Harvey Mann, one of the developers of Telstar, to appear on our fifth grade TV lesson. The children and teachers still have stars in their eyes.

Another objective of instructional TV is to share the talents of gifted teachers with many. We do not use the term "master" teacher because we consider the receiving teacher an important part of our team; we avoid the implication of a caste system.

How Is Educational Television Being Used Successfully?

Throughout the country, practically every subject and grade level are being taught to hundreds of thousands of children. It behooves each community to decide how needs can best be met by the use of educational TV; the patterns vary considerably.

Educational TV usually can be identified in four categories:

1. Supplementary lessons, usually taught once a week, which are related to courses of study and augment what the classroom teacher presents - For instance, in the elementary grades, the teacher must teach all subjects, with occasional help from a subject specialist. The supervisors extend their services through the gifted TV teacher in art, music, science, health and physical education. In one instance, a curriculum specialist asked whether a more interesting approach might be made to the social studies course for high school seniors relating the constitution to the law. The Philadelphia Bar Association and teenagers combined to present an exciting 15 week series. On another occasion, a request came from a number of junior high school English teachers for help in literature. Consequently, professional actors enacted excerpts from the books and stories on the reading list to stimulate ninth graders to read the

entire book. These are typical examples of supplementary TV lessons.

2. Enrichment lessons which are somewhat beyond the regular courses of study and are presented for selected pupils who will benefit from advanced content - For instance, a weekly course in science for accelerated groups of junior and senior high school pupils is presented by scientists from such organizations and institutions as Smith, Kline and French; Sharpe and Dohme; Philco; Philadelphia Electric; General Motors; Franklin Institute; University of Pennsylvania; and Temple University. Schools simply cannot approach this kind of content immediacy.

3. Basic teaching - In this type of organization, the major part of the course is presented by TV several times a week. In Philadelphia, our basic TV courses are presented three times a week; in Miami, they are presented five times a week. The important part of this arrangement is that the TV teacher prepares the telling, showing, and demonstrations with a vast supply of resources, while the classroom teacher concentrates on the applications and understandings. Thus, the pupils benefit from two skilled teachers serving as a team.

4. In-service education for teachers - Obviously, this is one of the most valuable uses of the medium, one expert in a new course or technique reaching many at the same time.

One of the experiments with TV is similar to team teaching. Several classes are scheduled to view a TV course at the same time, in a large room, with several TV sets, and usually two teachers. The course is offered three times a week. If four classes are scheduled with two teachers, six teacher periods per week are saved. This teacher time is used in the schools for special work with small groups of slow learners and/or rapid learners. In other words, greater service to children is possible with the same number of teachers.

What Have We Learned?

We find that children retain with amazing accuracy and understanding what they see and hear on TV. Teachers tell us that the bright ones surge ahead, accomplish more in a given time, and are stimulated to bring in increased amounts of outside resource projects. The slower children learn more by TV because it is visual and verbal. They are not hampered by their inadequate reading and writing skills. Rapid learners tell us that they are not held back in the TV courses by the questions of the slower pupils. Many pupils say that if they wait until the end of the lesson, their questions often are answered.

The need for more varied and precise testing of pupil learning is necessary. For instance, teachers say that a pupil who does not read and write well may explain a concept learned by the visual, verbal TV lesson; he may draw a diagram and properly explain it but when a written question is given be unable to read it and unable to write the answer. This points up an inadequacy of testing which existed well before teaching by TV and with which teachers are quite familiar.

Teachers have been delighted with the response of slow learners to TV art lessons. They state that the slow pupils often show great creativity in the application of TV lessons in art and writing. Many classes for the educable and trainable mentally retarded watch these programs regularly. The absence of color does not deter children in their creative applications.

An in-service course for teachers, entitled "Creative Writing for Slow Learners," was an exciting departure from the usual and yielded excellent results. It might be said also that creative writing was included in a language arts program for the sixth grade. A number of children who had never shown a spark of interest or ability came up with remarkable, original stories. ----

Opportunities for the participation of gifted pupils on TV are made available through a three week workshop in which they are trained in voice, radio script writing, TV production. These youngsters often are invited by commercial stations to participate on discussion and other programs as a result of the workshop experience.

"Common learnings" classes in senior high school have benefited from the TV lessons for elementary grades, and accelerated elementary school classes have received enrichment from the junior and senior high school courses.

TV lessons have been widely used for the homebound in a number of communities. These provide an opportunity for the children who are unable to attend classes to receive the same lessons at the same time and in the same way as their classmates in school. This type of service has been used to a considerable degree in New York City.

Programs which are largely visual, such as art, music, and physical education, are used, with excellent results, by our children in hard of hearing classes. (Radio lessons in music appreciation, news, dramatized stories are used by the partially sighted. We have not utilized the great potential of this resource.)

The practicality of using TV instruction in schools where there are serious discipline problems was questioned. Even in large classes, however, there are few discipline problems. The pupils feel impelled to get to classes on time for the TV lessons, and they feel that they must not miss anything. There is a psychological response which merits study. Perhaps the statement made frequently by pupils, "The TV teacher is talking just to me," is a partial explanation.

What Are the Plans for the Future?

The use of TV lessons for the slower pupils has not been fully studied. However, present findings indicate that this is a stimulating device which reaches children effectively. We haven't begun to use TV to teach children and adults skills for employment and retaining. This is about to begin in this area.

The use of video tape recording now permits a rebroadcasting of TV lessons several times during the week, which allows greater flexibility in scheduling times. There is now on the market a small video tape machine, which permits recording a program from the air and re-showing it to pupils whenever desired. The cost of these recorders is now about $10,000. However, a Japanese manufacturer shortly will have a transistorized video recorder for about $1,000. This will bring it within the range of some school budgets. Mass production will then lower the cost, and many schools will be able to secure such a device. A teacher then may record and re-show programs in her class when it is convenient, with as simple an operation as the present audio-tape recorder.

The day is coming, also, when there will be a library of video tapes, where pupils may select the program or lesson and view and listen on his own time to enrich, enforce, and extend his learnings. This will provide lessons for all levels and, it seems to me, will be particularly applicable for the individualized teaching and learning which is necessary for the exceptional child.

There also will be tremendous expansion of resources available on a national and international basis. Already, state and regional networks are being established whereby programs will be exchanged among stations, and a center for international exchange has been set up in London. Thus, the best available throughout the world will provide resources for our pupils via TV.

Major Robert White, the X15 astronaut, told the American Association of School Administrators in Atlantic City that the "doorways to the space age are the doorways of America's classrooms." In order to extend the walls and ceilings of those classrooms and to enrich the climate and substance of learning for all children, we have a powerful device of communication at our service. But it is only a facility. Its intelligent, effective use depends on the imagination and ingenuity of the human mind and our ability to apply this facility to the urgent need which confronts us.

Martha Gable, Director of Radio-Television,
Philadelphia Public Schools, Pennsylvania

THE EFFECTIVENESS OF COOPERATIVE AREA ADMINISTRATION FOR SPECIAL EDUCATION IN SUBURBAN AREAS

Ray Gardner

This paper deals with the development of a growing personal awareness of the effectiveness of cooperative area administration for special education. The viewpoint is that of an administrator of special education in a large suburban community in the metropolitan Detroit area -- an administrator who moved from a largely self-contained program toward awareness of new concepts in cooperative area administration involving his own and several surrounding districts in addition to the county office of education. While area cooperation was evident in Wayne County as early as 1952, we are here concerned with a new dimension to that concept.

To block in the background against which this scheme is cast, it is necessary to explain that Michigan functions under legislative action which is permissive with regard to special education programs. Because it is permissive and not mandatory, the concept of sharing is born of necessity. Proponants of permissive legislation will tell you that it fosters local autonomy and develops local talents. At the same time they will admit that such legislation does permit inconsistencies to arise between the same program in different communities. More about that later. The same people may also confess that evaluation of programs which are shared may be their greatest weakness. This is perhaps related to the fact that one does not readily point out weaknesses or shortcomings in that which is being shared -- particularly if one considers himself a recipient. The present paper purports to show that a broadened concept of area cooperative administration through the development of freedom in communication with resultant clarification leads to better evaluation and ultimately to improvement of programs.

It is also necessary to understand that the Wayne County Education Office is in actuality an extension of the office of the Michigan State Department of Public Instruction. The county office serves in an advisory, consultative capacity to local districts within the county with the goal of stimulating quality development of programs.

The Lincoln Park, Michigan public school system is one of 42 school districts within Wayne County outside of the city of Detroit. In 1956 cooperative programs with three adjoining districts provided services to the physically impaired, the hearing impaired, and the vision impaired children of the school district of Lincoln Park. These services had been earlier established through the guidance of the intermediate county school district. The task relative to special education within the Lincoln Park district in 1956 then seemed to be simply to carry on the communication already established with districts who shared their services and to devote energies to the organization of a local endogenous program for the mentally handicapped. In the establishment of this latter program and the subsequent five years of administration related to special education, psychological, visiting teacher, and evaluation services, consciousness of the presence of the county intermediate office was always there and its services were utilized in evaluation, upgrading, inservice training, etc. But it was not until the fall of 1961 that full cognizance of the effectiveness of cooperative area administration for special education made its imprint.

You will be spared the details of the origin of this greater awareness. Let is suffice to say that in many ways the two following major facts became evident: (a) variation in the quality of cooperative programs which appeared sometimes to leave some children with less than maximum development of potential and (b) much inconsistency between complementary programs.

To illustrate hypothetically: a child finishing his elementary training in a program for the orthopedically handicapped, upon transfer to a system providing him a junior high special education program, could be faced with a differing philosophy or emphasis which might impede adjustment -- an adjustment which at best would be difficult without the curse of avoidable complications.

To illustrate further: in the area of service to the deaf and hard of hearing, one might have found the following contrasts between any two of the eight districts offering this service:

1. One program might have limited service to the relatively moderately handicapped who had early established relatively adequate speech and who exhibited healthy behavior patterns while those more severely involved might have been referred to the state school for the deaf. By contrast, another program might be attempting to serve the severely multiply-handicapped, even those with severe emotional complications.

2. One program might have been found to be emphasizing parental counseling, even with parents of the early preschool child, as contrasted with another program seemingly resistant even to minimal parental contact.

3. One might have found a program with heavy emphasis on speech training and little attention on the academic, while another program might have had the reverse emphasis. The same contrast might exist relative to emphasis upon social development as opposed to academics.

It is the hallmark of creative leadership to be able to make continual evaluation of past accomplishments and move beyond the status quo. The consultant for special education from the intermediate school district of Wayne County had been largely responsible for the development of programs for exceptional children in Wayne County as they existed in the fall of 1961. By the spring of 1962 a critical re-evaluation of existing services had materialized into a new dimension -- in cooperative area administration.

The initial focal point for this new movement was the program for the deaf and hard of hearing. Through the county consultant's initiative, the special education committee of the Wayne County superintendent's association established the advisory council for the education of the deaf and hard of hearing of Wayne County. Appointed to the advisory council were the county consultant and the directors of the local programs serving these children. Invited to participate as consultants to the council were university, hospital, and state training school specialists.

The advisory council first met in early spring 1962. The exchange of ideas made possible through that and subsequent council meetings readily provided the following insights:

1. An awareness on the part of individual directors of the shortcomings or overemphases within each local program

2. An awareness of the necessity to evaluate assignment of a child to a given program in terms of teacher competencies as well as age level and geographical distribution

3. An awareness of a need for an inservice training program on an area basis to bring into proper perspective an individual teacher's or administrator's biases

4. An awareness of the necessity to restate the similarity of goals of local programs and those of state institutions for the deaf.

On the basis of the initial discussions of the advisory council, two new rooms for the hearing impaired were located in Lincoln Park. ---- Therein lies the secret of involvment in a program greater than the boundaries of a local district and its immediately adjoining districts which created an awareness of the value of cooperative area planning so that it could be told to you here.

In addition to establishment of two new rooms, some children who had been recommended for exclusion from the public school program pending admission to the state school were reassigned to a local program by the council. Happily, they adjusted very well and are making adequate progress. A better understanding of the similarity of the function of the local program and the state school is now evident. A regular inservice training program for teachers of the deaf and hard of hearing in Wayne County has been instituted. Interestingly enough, this inservice training is not conducted from a central office or university but is provided in the person of the director of special services in Garden City public schools through the courtesy of the superintendent. This director was formerly attached to a university training center for teachers of the deaf. The inservice training program has been very successful. Evidence of its potential success was seen almost immediately when the availability of this resource was made known to teacher candidates and was perhaps of no little influence in those candidates' decisions to come to Wayne County.

These are only a few of the many evidences of the effectiveness of cooperative area administration for special services. The Wayne County Advisory Council has continued to meet for the past year. Among additional accomplishments are the following:

1. Serving as a panel of experts to which particularly difficult cases may be brought for re-evaluation
2. Making hospital and other agency personnel who act as consultants to the advisory council familiar with the many aspects of the public school programs so that these school-agency personnel may more effectively deal with the problems of public school pupils who come to them
3. Providing area assignment of children which circumvents the shopping around for placement both by disgruntled parents and frustrated administrators
4. Being a jury of review for parents who may be unhappy with local decisions and who may need an outlet for their frustrations.

Two current problems on which the advisory council is now working are: (a) the establishment of public school services for the multiply-handicapped who also have a significant hearing impairment -- those children who are trainable or educable but whose needs cannot be adequately met in established programs and (b) an evaluation of current needs at the junior high level with consideration of establishing and locating resource rooms for this age child with hearing impairment whose needs are greater than can be met by an itinerant teacher-counselor.

These brief notes are an overview of some of the ways in which cooperative area administration for special education can be effective. Because of time limitations the example has been limited to one area of special education. This is not the full story.

Ray Gardner, Director of Special Services,
Lincoln Park Board of Education, Lincoln,
Michigan

DIVERGENT PRODUCTION PERFORMANCE AS AFFECTED BY TYPE OF TASK AND LENGTH OF TEST

Marvin Gold

The purposes of this study were twofold. First, it was our intention to explore the relationships among several scoring procedures used in assessing divergent production and, secondly, to investigate the effects of test length upon divergent production performance.

The reasons, of course, for exploring these areas should be quite evident. It is assumed that divergent production, the ability to think in a variety of ways, is a most important facet of creativity. Several instruments are available for use, but unfortunately there is very little evidence as to the relationships between the kinds of scores used. Also, we can legitimately ask: are we limiting the most unique ideas within an individual's repertoire by limiting the length of test time? For the most part, testing time has heretofore been quite brief.

The Ss for this study were 365 high school students who attended the 1961 National Science Foundation summer school program in seven different centers throughout the state of Tennessee. They were, for the most part, gifted individuals whose mean verbal Large-Thorndike IQ was better than 128.

Two instruments were employed. They were the Uses of a Brick Test and the Number Four Test. The Uses of a Brick Test, an adaptation of the Guilford instrument, asks the S to list as many different ways as possible that a brick might be used. It is assumed that non-goal-directed divergent thinking ability is tapped by such an instrument. The Number Four Test, which was created for this study, required the S to put down "the many different combinations of numbers and/or combinations of methods" that he could think of that would give the answer four. This may be thought of as a goal-directed divergent production task.

There are two definitions that might be considered basic to the understanding of this study. Goal-directed divergent production is defined as that type of thinking that is reflected in the solution of a task in which the end product only is given. It requires the individual to describe as many different methods of reaching a specified goal as possible. An example of a problem associated with this type of production might be one such as the development of alloys having specific qualities or methods of combatting leukemia. Non-goal-directed divergent production, on the other hand, is defined as that type of thinking in which the S starts with a given piece of information and develops many possible results based on that piece of information. Illustrations of this type of production are problems such as the determination of various applications of a particular mathematical formula or increasing the number of uses of some raw materials.

A long and short form of both the Uses of a Brick Test and the Number Four Test were administered. The long form was a 45 minute test whereas the short form was five minutes. Identical directions were given for the long and short forms of each test.

The Ss were randomly divided into two groups. The classroom teachers administered to the first group the short form of the Brick test and the long form of the Four test and to the second the short form of the Four test and the long form of the Brick test. Every five minutes during the administration of the 45 minute forms of the tests, the Ss were instructed to turn to the next page. This was done to ascertain each Ss production within each five minute time period.

Five scores were computed for each divergent production test. These were (a) fluency - the number of different responses made by an individual, (b) number-of-sets - the number of different main ideas the S used, (c) change of set - the number of times an individual changed his approach to the solution of a problem, as evidenced by a change of "main ideas", and (d) limit-of-uniqueness - the highest uniqueness value the S obtained within each test. Each set was assigned a uniqueness value; the more frequently used sets, of course, had lower values and the less frequently employed sets had higher values. Finally a summed-uniqueness score was computed. This score was calculated by summing all of the uniqueness values earned by a S.

To evaluate the reliability of the scoring procedure as well as to determine the degree of transcription error, four graduate students not connected with the study rescored a two percent random sample of pages from the original data. Fluency, number-of-sets, and change-of-set were the scores employed in determining the reliability. Interjudge agreement on scoring procedures for fluency, number-of-sets, and change-of-set were all found to be high. The minimum coefficient of concordance was .93. All Fs were significant at the .01 level. The mean ranking of the judges was then compared to the investigator's ranking in order to assess the degree of transcription error as well as to have another measure of interjudge reliability. The degree of agreement between the judges' mean ranking and the investigator's ranking seemed satisfactory as evidenced by all coefficients being at least .92. It was concluded that with directions for scoring as given, there was high interjudge agreement on the scoring procedures used for fluency, number-of-sets, and change-of-set. It was also concluded that transcription error was at a minimum.

In most instances, significant relationships were found to exist between all divergent production scores. In the long form of the Brick Test, fluency, number-of-sets, and change-of-set showed substantial correlations with summed-uniqueness. These correlations ranged from .65 to .71. Its short form counterpart showed much lower, yet still significant, correlations. The Number Four Test, on the other hand, had very high correlations between summed-uniqueness and number-of-sets for both its forms (.86 and .94). Fluency, however, was found to correlate negatively with all other scores in both forms of the Four Test and positively with all other measures in the Brick Test. In other words, on the goal directed divergent production Number Four Test, the more responses a S used, the less likely it was that the responses were unique and the less likely it was that the S changed set.

The Mann-Whitney Test was then employed to determine if differences existed between a group of Ss taking the five minute form of a divergent production instrument and a group administered the 45 minute form of the same instrument. The question to be answered here is how does expected test length affect divergent production. The comparison was made between summed-uniqueness scores for the entire short form and the first five minutes of the long form. Highly significant differences did exist, favoring the short form of the Number Four Test and the first period of the long form of the Brick Test.

Divergent production performance across time (as measured by the summed-uniqueness score) was then analyzed for the 45 minute form of the two instruments. The Friedman Two-way Analysis of Variance was employed to determine whether divergent production for the group as a whole was significantly better during any particular five minute segment or segments of the test. Significant differences were found in the case of both instruments. Visual inspection of the mean ranks across time suggested that a further breakdown of the ranks be attempted. It was found that there were no significant differences in the rankings of periods two through nine for the Four Test. The sign test was then employed to compare whether the ranks in period one were significantly different from the average of the ranks of the remaining periods. It was found that period one was a higher ranking period than the average of the remaining periods. In other words, the group as a whole did its best work during the first period of the test. This, however, does not mean that the most unique responses necessarily occurred during the first period.

The same procedure was used in assessing rank differences across time for the Uses of a Brick Test. Here, however, it was found that three groups of time periods evolved that could be said to have intergroup differences in ranks, but no intragroup differences. The first period again proved to be in a group by itself. Periods two through six formed the second group, and periods seven, eight and nine, the third group. The sign test was again employed to test whether the mean ranks of these newly formed groups were different from each other. All comparisons were in favor of the earlier groups of time periods.

Although analysis by ranks showed, in general, descending performance curves, a comparison of performance across time using the mean summed-uniqueness raw score values proved to be a bit different. Although the Number Four Test and the Uses of a Brick Test were not directly comparable, since their respective uniqueness values were based on different groups of sets, it was noted that for the Brick Test a curve quite similar to the ranking curve was developed, while for the Four Test a different picture evolved, at least as far as period one was concerned. Through inspection of the summed-uniqueness data, it was ascertained that many Ss presented all of the different sets they employed on the entire Number Four Test within the first five minute period, consequently affecting the mean rank. These responses for the most part proved to be rather common ones, which were assigned relatively low uniqueness values because of their commonness. However, even this relatively low summed-uniqueness frequently exceeded the later performance of these Ss, causing their first period ranks to be high. It was therefore concluded that (a) a more accurate qualitative picture of goal-directed divergent production across time probably could be determined by a consideration of average summed-uniqueness scores and (b) a significantly better first period rank reflected the best period of performance for the group as a whole.

The summed-uniqueness score for each period combined with the scores for all periods preceding it was correlated with the summed-uniqueness score of the entire test. Correlations over time increased rapidly for both instruments. By the end of the fourth period, about 86 percent of the final summed-uniqueness variance was accounted for in the Brick Test and 90 percent in the Number Four Test. The increments in correlations had decidedly tapered off by this point. This of course might indicate that test periods shorter than 45 minutes would give us much the same information as would a larger test. But what about superior Ss? How did they fare?

Ss whose final summed-uniqueness score was within the top 20 percent of scores were considered to be those whose performance was superior. Their progress across time was traced by means of identifying their relative position within four bands of scores -- below mean, mean to +½SD, +½SD to +1SD, and above +1SD. There were 37 Ss in the top group of the Brick Test. At the end of the first period, eight of these 37 Ss were performing below the mean of the entire group taking this test. It was not until the end of the third period that the entire 20 percent went above the mean and stayed there. Using the same basis (final score) 36 Ss were found to be in the top 20 percent of the Four Test group. Their performance was followed across time also. It was not until the sixth period that all Ss in this group were performing above the mean of the entire group.

Following this analysis, the progress of those Ss whose final cumulative scores exceeded +1SD was charted. Approximately 12 percent of the Ss who were administered each test had final summed-uniqueness scores above 1SD. Even among this select group there would have been some Ss lost if the test administration were too brief.

There are several considerations in determining the length of test time, e.g. how many different kinds of information the tester can gather in a specified amount of time. The above results indicate one additional consideration he must face. He must now decide whether or not he is willing to misclassify a number of superior Ss. The degree of error he is willing to employ regarding this should indicate to him the length of divergent production test time he should use.

The final question that this study hoped to answer is related to other subgroups (aside from superior Ss). We asked: Are there other subgroups that perform differently across time when compared to the group as a whole?

It was found that there were a number of different patterns of divergent production over time. There were groups of Ss who responded best in the early time periods, others who responded best in the later periods, and still further groups who responded best in the middle time periods. Clusters of Ss who performed in the same manner across time were found to exist for both instruments. More important, it was possible to replicate some clusters. This cross validation indicated a very low likelihood of chance occurrence of subgroup patterns. ---- For the most part those groups having the highest summed-uniqueness scores were those whose peaks occurred during later time periods.

This study did not concern itself with the meaning of these curves or the relationship of them to other variables for several reasons. To assess adequately all of the implications of the appearance of different subgroup curves, more information about other variables would have to be available than was possible in the present investigation. Such variables as personality factors and occupational preference, for example, might be related to divergent production performance across time. A much larger N, of course, would be necessary if the curves were further subdivided into levels of performance. That different subgroup curves were found was the important result of this analysis. Further investigations will be necessary before their meaning and value, if any, become clear.

The following were the main points brought out by the present investigation:

1. There was high interjudge agreement on scoring procedures used for fluency, number-of-sets, and change-of-set.

2. In most instances, significant relationships were found to exist between all divergent production scores. Fluency correlated negatively with the summed-uniqueness scores on the Four Test but positively on the Brick Test.

3. In investigating the psychological set of Ss as affected by expected length of test, it was found that highly significant differences did exist favoring the short form of the Number Four Test and the first period of the long form of the Brick Test.

4. It was thought that a more accurate qualitative picture of goal-directed divergent production across time could be determined by a consideration of average summed-uniqueness scores rather than average ranks. Mean ranks, however, were found to be useful in assessing the period of best performance for the group as a whole.

5. For both instruments, by the end of the fourth period, that is 20 minutes, summed-uniqueness scores had correlations of at least .93 with the final 45 minutes summed-uniqueness scores.

6. Several Ss showing extremely high summed-uniqueness scores for the total 45 minute period of each instrument would not have been identified as superior if the test were terminated too early.

7. Several different patterns of divergent production over time were identified and replicated for both the Brick Test and the Number Four Test.

Marvin Gold, Assistant Professor, Education
for the Gifted, Syracuse University, New
York

THE USE OF EYE REPORTS FOR STATISTICAL PURPOSES

Elizabeth M. Hatfield

The eye examination report from the statistical point of view is an extremely important document. It serves not only to identify the children who have vision problems but as a source document for basic statistical information regarding the eye conditions of these children.

The National Society for the Prevention of Blindness became concerned with eye reports through its need, and that of agencies serving the blind, for better statistical data on the problems of blindness. This interest and concern dates from the early 1930's. Answers to such questions as "How many persons are partially seeing or blind?" and "What are the chief causes of vision impairment or blindness?" are needed in order to have sound planning of programs for prevention.

The eye examination report for children, as collected by the school, has provided us with our most important and in some instances the only source of information on the visual problems of this age group. It is on the basis of these that we have been able to plan programs for the prevention of needless blindness in children.

History

A brief historical account of the development of statistics on blindness will, I believe, point up the importance of the eye examination report form in a prevention of blindness program.

In 1930 the American Foundation for the Blind and the National Society for the Prevention of Blindness held a conference to discuss the problem of securing adequate and meaningful data on blind persons. The chief sources of data on the number and characteristics of the blind and causes of blindness had been, since 1830, the decennial censuses of the United States and a few special studies. However, agencies working in the fields of welfare services to the blind and of prevention of blindness found these data inadequate for their needs. The value of information concerning causes of blindness from the census reports was questionable since this was based on statements of the blind persons themselves rather than medical reports. Also, data from the special studies were not comparable due to the lack of standardized procedures. An outcome of this conference was the creation of the Committee on Statistics of the Blind sponsored and financed jointly by the two organizations. The Committee was charged with the responsibility of developing improved statistical methods in this field and standardizing definitions, classifications, etc. This Committee is still functioning, now as the National Society's Committee on Operational Research with the same chairman, Dr. Ralph G. Hurlin, formerly of the Russell Sage Foundation.

The first and most important project undertaken by the Committee was the development of a Standard Classification of Causes of Blindness. The primary objective of this was to devise a plan that would produce the etiological data needed in formulating preven- n of blindness programs. Such a classification scheme was developed and has since gone through a number of revisions. In each successive revision, the original scheme was retained. The changes made were mainly to improve it and incorporate the results of advances in our knowledge of eye pathology. It provides for a two-fold classification of the cause of blindness: (a) by the site and type of eye affection primarily responsible for the vision impairment and (b) by the etiological factor which is the underlying cause of the eye condition. The affections are grouped according to parts of the eye affected. Etiologies are grouped under six main headings: infectious diseases, trauma, poisonings, neoplasms, general diseases, and prenatal influence. Provision is also made for undetermined etiologies including those unknown to science. For a prevention of blindness program it is not enough to know that the blindness is due to optic nerve atrophy, for example.

We need to know the underlying cause of the eye condition, that is, the specific infectious disease, injury, tumor, etc., which may be subject to prevention or treatment.

It was recognized by the Committee that a uniform manner of reporting was also essential in order to obtain comparable data on cause. It was found that many agencies were relying upon the physicians to supply whatever information regarding diagnosis they wished to give. Also, some agencies had special report forms but these did not call for the information which the Committee felt was essential. Therefore, a simple report form was developed to be used by the examining ophthalmologist in reporting his medical findings and recommendations to the agency for the blind. This report form was adopted by many agencies without change or with modifications to meet specific agency needs. A slightly revised version of this form is still in use today. State agencies wishing to develop their own forms were urged to include the items considered essential by the Committee. These were: onset of blindness, eye condition which caused blindness and its etiology, central visual acuity measurements, and if limited, measurement of field of vision.

To test the standardized procedures developed, the Committee secured the cooperation of a number of schools for the blind. For the 1932-33 school year a study was made of the causes of blindness of the children enrolled. Arrangements were made to continue these studies periodically, and as time went on other schools and public classes for the blind were added. A series of reports on these studies has been published, starting with the 1933-34 school year. The most recent study for the 1958-59 school year has been completed, and the report is due for publication soon. This series provides the only information available on the causes of blindness for this age group. While it is recognized that the sample studies may not be representative of the school age blind population since participation of the schools is voluntary, an analysis of the findings does indicate where emphasis needs to be placed. The physician's eye examination report form was distributed to all participating schools for the collection of information necessary for the studies. The schools were encouraged to use these same forms for their own records, and many of them do so.

Once the studies of the school age group were well underway, the Committee began to stimulate state agencies for the blind to make similar studies of the blind persons on their registers. A number of such studies were made.

Also the Federal Security Agency made a study of causes of blindness among recipients of aid to the blind in twenty states during the years 1940 and 1941. The agency at the inception of this program had recommended that the eye examination report form developed by the Committee be used. These records, used in many states, produced a valuable new body of data relating to blindness in adults.

So far, my remarks have been directed at the development of an eye examination report for the legally blind. Eye reports for the partially seeing are just as important. This was recognized by Mrs. Winifred Hathaway (1943). She states, "Carefully prepared, concise, and up-to-date records are essential to the success of any undertaking with partially seeing pupils." She goes on further to say, "Unless the teacher is familiar with the condition of the eyes ..." (as well as the general health and the mental, physical and emotional development of the child) "... she cannot hope to prepare and conduct a well-rounded program suited to his needs" (Hathaway, 1943, 47). A suggested "Physician's report of eye examination" as well as a cumulative record was proposed for use by the schools. These suggested record forms are brought to the attention of schools establishing special programs for the partially seeing. The eye report is simple and provides for the securing of information necessary for planning the educational program for the child with a vision problem.

A survey of eye reports in use by school systems reveals that many now use one or both of the forms recommended by the National Society or one of their own design based on these recommendations.

Revision of the Eye Report Form

A further revision of the Standard Classification of Causes of Blindness was published in 1960. Work was then begun on the revision of the 1940 manual of instructions for the use of the classification. Such instructions are essential to insure that the classification is uniformly used to produce comparable data on cause.

It seemed desirable to include in the manual, as in the previous edition, a recommended physician's eye examination report. Considerable time and effort has gone into the study and development of an appropriate report form. Since our primary interest is in the cause of blindness, particular attention was given to this section of the form. It has been evident from our studies of school children that the physicians are not reporting diagnostic information as adequately and completely as desirable for classification purposes. Also, a review of report forms used by state agencies revealed that not all of them have given adequate consideration to the procurement of cause information. Unless the physician is asked to report his diagnosis of the cause of blindness in a uniform manner, we cannot hope to have comparable statistics on this item.

This problem has special significance in view of the organization a year ago of the Model Reporting Area for Blindness Statistics. Nine states are members of the area. The primary purpose of the organization is the development of reliable and comparable statistics on the number and characteristics of the blind population and causes of blindness. The standardized procedures developed by the National Society's Committee on Operational Research will be used by the states in compiling data on the known blind on their registers.

We now have a form which we feel is worth trying. It is anticipated that the states in the MRA will adopt this form without change or with slight modifications to meet their individual program needs. This form is also being given consideration by the Bureau of Family Services in the development of a form for use by agencies administering the Aid to the Blind program.

The foregoing relates to the development of a general, basic eye examination report form. It was recognized that it would need to be modified to meet individual program requirements. Since the National Society has recommended standard eye report forms for use by schools serving blind and partially seeing children, it seemed appropriate that we develop a revised form or forms for this purpose. This we have done.

The work on the form, "Eye Report for Children with Visual Problems," has been stimulated by the interest of Dr. Albert E. Sloane, ophthalmic surgeon on the staff of the Massachusetts Eye and Ear Infirmary. Dr. Sloane is also Chairman of the National Society's Advisory Committee on Vision Screening.

Only one form has been developed which will be recommended for use for reporting on both the partially seeing and the legally blind. This is appropriate since a large proportion of the legally blind actually have partial vision. The medical information helpful to educators would be identical for both groups of children.

The form has been coordinated with that to be recommended to agencies serving the blind. As I have pointed out, the section calling for diagnostic information is particularly important. It would be extremely helpful if this could be standardized on all eye examination report forms. Then the ophthalmologist would not be confronted with so many different forms to fill out. One problem is still with us. We need the cooperation of the ophthalmologist to improve the quality of diagnostic examinations and reports. It is hoped that through the efforts of the MRA states, the ophthalmologist can be educated to the importance of this information and stimulated to provide more adequate and complete reports.

Consideration has also been given to the special needs of education specialists. Forms now in use by many schools were reviewed. We were pleased to find so many modeled after those which we recommended. A number of education specialists and school ophthalmologists in various parts of the country were asked to review drafts of the form and offer their criticisms and suggestions. These were taken into consideration in the development of the latest draft which is now being circulated for further review. The form will then be printed and distributed to all schools for their information and consideration. The form will be used in our future studies of causes of partial vision and blindness in school children.

Information Needed for Statistical Purposes

There are certain items on the report form which are essential for a complete analysis of the problems of vision impairment. Actually much of this information should also be useful in planning educational programs for these children.

In order that data from various programs may be combined or the results of individual studies be comparable, it is necessary that the information be reported in a uniform manner. This is the function of the standard report form. It sets forth the information desired and the way in which it is to be reported.

Let us now consider the essential items according to the sections shown on the proposed report form:

1. Identification

Information on sex, race, and birth date is generally basic to an analysis of a population group. For analysis, tabulations of other information on the record are prepared according to groupings of these data. Frequently there are differences on one or more of these factors which need to be evaluated.

The item "date of birth" is preferable to "age" on any record form. It is permanent whereas age must always be related to the date recorded, such as date of examination.

2. History

Data on age at onset, although not well reported, has special significance for both education and prevention programs. On the basis of this information cases of adventitious blindness can be separated from those that are congenital. Also, this information is useful in determining the proper cause classification, particularly when the cause differs for each eye. In such a case, assignment is made to the cause for the last eye to go blind.

Family history of the eye condition is necessary in the cause classification for the establishment of a hereditary condition.

3. Visual Measurements

Provision has been made in this section not only for distance vision but for near vision and vision with low vision aids, this information being of value to the educator. For statistical purposes, vision is generally classified according to the amount remaining in the better eye after correction. In some future studies it might be worthwhile to examine data on near vision and use of low vision aids. However, this will depend on the consistency with which these items are reported.

It would be very helpful if we could secure more accurate reporting of visual measurements by the examiner. From analysis of data on distance vision for example, it appears that, in the case of the legally blind at least, many examiners are guided solely by the legal definition of blindness and measure only accurately enough to ascertain whether visual acuity is less than 20/200. This is unfortunate because, in analyzing the vision problem and relating it to what the individual can do, it would be helpful to be able to separate the cases into finer gradations of remaining vision. Until we have more accurate assessments of visual acuity, such an evaluation is not too meaningful.

4. Cause of Vision Impairment or Blindness

From the point of view of prevention, this of course is the most important section. It may have more detail than you feel essential or are interested in. However, it is hoped that the foregoing has helped to point up the need for this information if we are to adequately evaluate the needs and eye problems of children with impaired vision. Very careful consideration has been given to the medical data needed for classification purposes. It is not enough to ask merely for diagnosis and let the ophthalmologist report whatever he wishes. Therefore, the reporting of the cause has been divided into three parts to guide the ophthalmologist in designating the eye condition responsible for vision impairment and its underlying cause or etiology. The terms primary and secondary as used on the old form have been avoided because they were apparently not understood. We are hopeful that the new format will prove to be more successful in eliciting the information desired.

Before leaving the eye report form, mention should be made of the final section which is very important although it does not contain information particularly valuable for statistical purposes.

This section, "Prognosis and recommendations," has been expanded to permit the ophthalmologist to indicate any special considerations which he feels the child's eye condition warrants in the school situation.

Studies of Causes of Blindness

The studies of causes of blindness in children of school age are a good example of the use which we have made of eye examination reports.

The purpose of these studies is to provide a basis for determining the most important problems in preventing blindness in children. They enable us to evaluate the effectiveness of prevention measures that have been put into operation and bring to our attention new causes requiring consideration as they appear.

These studies have been made possible by the cooperation of the residential schools for the blind, city school systems having special education programs for the blind, and in this last study, many state departments of education. The participating schools supplied copies of the eye examination reports of all legally blind children enrolled for classification and analysis. In the 1958-59 study, 28 residential schools, 13 city school systems, and 22 departments of education participated. In all we had records on a total of 7,757 children or 57.5 percent of all those registered with the American Printing House.

These studies have shown a decrease, for example, of blindness from infectious diseases. The effectiveness of public health measures in preventing blindness due to ophthalmia neonatorum is very clear. In the first study (1933-34) 10.7 percent of all the children were blind due to this cause. The 1958-59 study shows 0.3 percent. A comparison of the figures from a study made in 1906-07 of a small sample of children in schools for the blind is even more impressive. The findings of that study showed 28.2 percent of the children blind due to this cause.

In 1950, a study of blindness in preschool children was made. There was a great deal of concern about the ever increasing amount of blindness in this age group. Begin- in the middle 1940's the rate of blindness in infants was seen to be increasing due to a cause which had previously appeared too infrequently to be recognized as an entity. Until this time, the studies of school children had produced reasonably satisfactory data on the causes of blindness in the early years of life since three out of four cases occurred in these years. However, most of these children had not reached school age. Hence, the study of preschool children was needed.

By 1950 services for the young blind child had been developed in many states. We were able to secure eye examination reports for each child on the register. The results of this study revealed that one cause -- retrolental fibroplasia -- was responsible for nearly 50 percent of all blindness in this age group.

You all know the story, I'm sure. As a result of research sponsored by the National Society, this cause was linked to the administration of oxygen to premature infants. Measures controlling the administration of oxygen to these babies has virtually eliminated RLF as a cause of blindness. In the schools today you are now feeling the full impact of this increase in the number of blind children. Our 1954-55 study of school children showed 19.3 percent of those in the study were blind due to this cause. By the 1958-59 school year this proportion had increased to 33 percent.

These studies point up the need for additional research into the causes of blindness in children. One of the biggest problems is blindness due to unspecified prenatal influence. This cause accounted for 47.7 percent of all blindness in the last study. The proportion of such cases has remained high in each successive study. The introduction of appropriate preventive measures must be preceded by proof of causal relationships.

Study of Partially Seeing Children

The National Society also made a study of the causes of visual handicaps of partially seeing children in 1950.

For this study the teachers of special classes for the partially seeing were asked to tabulate information from the eye reports for these children on a special form by sex, vision, and cause groups. This is not entirely satisfactory, for each teacher was required to interpret the diagnostic information on the report form and classify it according to broad cause categories. Sometimes this is not easy, and the data are subject to differing interpretations.

The results of this study showed that nearly 50 percent of the visual handicaps were due to refractive errors. Developmental anomalies of structure accounted for another 22 percent, and defects of muscle function, 18 percent.

It was hoped that the report of this study would prove useful to school authorities in planning for further expansion and improvement of facilities for partially seeing children and to classroom teachers in understanding the specific needs of the visually handicapped child.

Summary

The studies which we have made on the basis of eye examination reports show how useful and important these are to meet the statistical requirements of sound planning for the prevention of blindness. These studies have helped us assess the magnitude of the problem of partial vision and blindness among children, the causes of these impairments, and the needs for special education services. It seems desirable to repeat these studies periodically in order that trends may be noted and education and vision conservation programs adapted to meet changing needs. This we plan to do, hopefully with your continued cooperation and assistance. In addition, there are many studies which can and should be made correlating the information on the eye report -- such as age at onset of impairment, amount of vision, and cause of impairment -- with data from other school records for these children.

References

Hathaway, Winifred. Education and health of the partially seeing child. New York: Columbia University Press, 1943.

Elizabeth M. Hatfield, Consultant in Statistics,
National Society for the Prevention of Blindness, Inc., New York City

ISSUES IN DETERMINING STANDARDS FOR PROFESSIONAL PERSONNEL IN SPECIAL EDUCATION AS VIEWED BY THE ADMINISTRATOR

Robert A. Henderson

One of the distinguishing marks of a profession, as opposed to other occupations, is its ability and willingness to assure the competency and ethical standards of practice of its members. If education is to rise from its present semi-professional status, educators must provide three sets of standards for the profession: (a) standards of selection of personnel, (b) standards of preparation, and (c) standards of ethical practice. The machinery needed to develop and enforce these standards includes: (a) accreditation of preparatory programs, (b) local, state, and national commissions on ethics and standards of practice, (c) licensure with professional control, and (d) criteria for membership in the profession. While the public has responsibility to develop broad policy for education as a social institution, to determine purposes it wishes this social institution to accomplish, and to provide conditions conducive to achieving these purposes, it must grant to the profession autonomy: first, in determining the means to accomplish the purposes set, and second, in insuring the competency of professional personnel.

It took World War II's manpower shortages and the resultant lowering of teacher certification standards to bring about the formal inception of a professional standards movement in teaching. In 1946 the National Education Association created the National Commission on Teacher Education and Professional Standards (NCTEPS). During the sixteen years of its existence, the National Commission and the state TEPS commissions have achieved a remarkable record. The Council has had a part in this movement and in 1961 named "Professional Standards" as the theme of the annual convention. Looking to the future, where we go from here will in large part depend upon two factors: (a) the extent to which we can agree within the profession on desirable standards and the methods of enforcing them and (b) the extent to which we can convince the public that we know what we are doing and how to do it so that they will grant us as a profession the legal sanctions needed to accomplish the development and enforcement of standards.

The critical issues then are: who determines the standards, and how are they enforced? As the "purchaser" of the product of the teacher-training institutions, the administrator has an important stake here. Low standards of selection and preparation produce poor teachers, resulting in high personnel turnover and low quality of educational programs -- not to mention the early demise of administrators responsible for the development of these programs. Thus, the purpose of standards -- the guarantee of competency -- is of crucial importance to the administrator. Since he is so directly involved, he should be included in the process of determining standards.

It is important to note that standards of preparation should not imply standardization of preparatory programs. The issue here is the creation of standards rigid enough to guarantee quality, while at the same time flexible enough to enable preparatory institutions to create unique solutions to the problems of effective teacher training within the resources and structure available.

Administrators especially do not want any faction within teacher education to be able to dictate the method of meeting standards. The key is not in how the standards are achieved but that the results in terms of teacher competency are obtained.

From the administrator's standpoint then, the issues in determining standards for professional personnel in special education involve: (a) agreement within the profession of basic standards based on expected outcomes in terms of teacher competencies and (b) defining these standards in such a way that allows flexibility of programs while still guaranteeing quality of product.

Robert A. Henderson, Associate Professor,
Institute for Research on Exceptional Children,
University of Illinois, Urbana

PROGRAMMING FOR SEVERELY RETARDED PRESCHOOL CHILDREN

Gladys Hiner

The current philosophy of curriculum for the severely mentally retarded child appears to be shallow and quite limited in scope. That which has been written and done seems to be held to an unimaginative approach embracing a concept which stresses training in self-care. The term "training" suggests an imitative behavior on the part of the child in contrast to possible emerging behavioral patterns. The severely retarded child has been referred to as the "trainable" child. In a majority of our states, the public schools make provisions under existing special education laws for the establishment of classes for the so-called trainable child.

Very likely, the restrictions imposed by the term "trainable" induce teachers to utilize the concept of concrete learning with severely retarded children to the exclusion of a more realistic visualization of his individual potential. This is, of course, not an indictment of all teachers of this group, nor is it the intention to belittle their efforts. Surely, it is necessary to induce a child to see, to touch, to manipulate. May it not also be just as essential to elicit reaction on the part of the child.

In programming for severely retarded children at Dale Rogers Training Center, perhaps it is safe to say that our emphasis with the preschool child is not on training, per se. Rather, may we say the programming is based upon our own philosophy: a philosophy whose ingredients include what we know about child development and what we know about child psychology, plus a keen desire to provide a healthy environment conducive to maximal positive development of the child. We cherish no illusion that the development of a child will produce a greater level of intellectual functioning than that which will enable him to dress himself, feed himself, and care for himself more adequately in inter-personal relationships. At the same time our programming does not limit the functioning to these goals. It appears fruitful to visualize that an emerging self-concept may give more meaning to the tasks which he performs. If we may be speculative, it appears reasonable to presume that a measure of ability to handle symbolic material may reveal itself even in a severely retarded child who has developed a positive self-concept.

Calvin Nelson, writing in Mental Retardation, reviews the definition of self-concept held to be valid by various psychologists. He offers Carl Rogers' (1951, p. 498) definition as a basic form esteemed to be acceptable. "Rogers notes that the self is formed as an organized, fluid, yet consistent conceptual pattern of perceptions of characteristics and relationships of the "I," of the "me," together with the values attached to these concepts. This self and its awareness results from the interaction of the individual with his environment and particularly with the individuals in that environment."

There is a serious lack of experimental material in the literature concerned with the development of the nature of the self-concept in the retarded child. There is no empirical evidence upon which to base an assumption that the self-concept formation in mentally retarded children is significantly different from that in normals. One variable factor involved in the achievement of a positive self-concept is that of one's native potential for adjusting. Whether or not this variable can be controlled by an environment whose demands are within achievement possibility of the individual child remains to be determined.

Curriculum has been defined as including "all of the experiences of children for which the school accepts responsibility" (Ragan, W. B., Modern Elementary Curriculum, Dryden Press, 1953). Closely related to, even part of, the curriculum of the severely retarded child is the environment. In our case this environment includes the classroom, every article and piece of equipment in the classroom, the playground and playground equipment, the teacher, the school bus and bus driver, and every individual who becomes a part of the activities in each of these settings.

How Routine Is Evolved and for What Purpose

1. Gives security to day's adventure

2. Offers opportunity for reaction to planned activity and participation in it

3. Expectations: (These are expectations of the teachers for the children.)
   Getting lunch and pouring milk
   Putting up lunch boxes
   Removing and hanging wraps
   Selection of toys
   Initiating play
   Replacement of toys
   Riding tricycle in designated areas
   Feeding pets

A structural pattern for daily activity evolved early in the school year. For want of a better description we might use the term "routine" in referring to it. Children coming into the room were assisted in removing hats and coats and putting away lunch boxes. Encouragement in taking off their own coats and hats as well as in related tasks was always given. Praise was given for achievement. Gradually, encouragement and praise were replaced by a casual acceptance of each child's achievement and progress in this area. The teacher operated in a fashion which suggested that she expected each child to do what he could.

Initiation of play by the teacher, which was expedient at first, was gradually displaced by the children initiating their own play activity. Choice of play was free, and personal selection of toys became more and more prominent each week.

Early in the school year, after about an hour of free play the teacher began putting away the toys and setting the room in order, preparatory for telling a story, reading a story, or listening to music. The children responded by helping her in this task. Out of this experience has evolved a rather well regulated pattern of free play followed by putting away toys and choosing a chair to sit near the teacher for a quiet time of music, stories, or a related teacher planned activity. This procedure, after seven months in the classroom, is by no means a routine, trained response. It is characterized by a healthy reaction on the part of many of the children as they develop an awareness of their own powers to challenge authority, their own need to exploit the teacher, and as one feels good enough about himself to seek to satisfy his own immediate pleasures. The behavior of each individual child in these experiences is always the direct concern of the teacher.

It seems prudent at this point to examine in a rather general fashion the children in this group as to age, IQ, etc. There are eighteen children in the group. Their ages range from four years to six and one-half. For reasons beyond the control of the Director of Training at the present time, a very wide divergence in ability level obtains. Three children in the group fall below an IQ of 20; the upper range is a score of 47. Eight in the group have no speech.

The need for a structural pattern or routine within which a child can operate would appear to be obvious. Limits are set within the structure. The child learns to operate within the limits; he is challenged to test the limits, to develop new habits out of past acquisitions. He has opportunity to behave in various situations and to enjoy a variety of experiences through which he may expand his skills.

How Units Are Planned and Developed

Units of study are planned to lend a modicum of organization to activities for the children. The attention of the teacher is focused always on the behavior of the child. The valentine unit, as an illustration, was planned to expand the experiences to an inclusion of the current seasonal interest. Emphasis was given to creating in the classroom setting an environment conducive to activities which would relate the child to the world of reality around him in a meaningful fashion.

Early in February the room was decorated with valentine mobiles, and the bulletin boards, with valentines. An ongoing research effort to construct a sociogram by means of taking a photograph of a child with whomever he chose, in lieu of answering the questions customarily asked of an individual in such an effort, was used. Group photographs were also made. The teachers fashioned a large valentine on which the group picture was mounted. Each child pasted a small cut-out heart around the photograph on the mounting, and this became a large valentine. They made one for the school secretary and one for each of the other classroom groups in the Center. A silhouette was made of each child, and when mounted this became a valentine to take home to his family. Everyone was involved in decorating a valentine box for the Valentines Day party--when they all had a good time with cake, punch, and "valentine delivery" in the room.

The pupils' photographs were used on a bulletin board the two weeks following February 14. The children were invited to bring snapshots of their families to display. They talked about mamas, daddies, sisters, and brothers. On one bulletin board a simple life-size drawing of a man, a woman, a girl, and a boy was displayed. Parts of the body were learned by some of the children. Some of them distinguished the man from the woman, from the girl, from the boy, etc. Differences in clothes of men and women, boys and girls were discussed.

In recalling some of the experiences of this unit, one teacher remarked that several of the children appeared to feel, particularly after the experience of making the silhouette, "Look at me," "I am somebody," "I am me." Many of them pointed out their photographs or silhouettes to visitors who came into the room.

How Parents Are Specifically Drawn into Learning Situations

It is not unusual to encounter parents who are altogether too comfortable with their retarded child. Their rejection of the child is subtle indeed. One parent probably consciously felt she was quite accepting of her child's "slowness" when she allowed the child one and one-half hours to eat her lunch, another hour and a half for dinner. Conceivably, the child did not take this much time to eat his breakfast before coming to school in the morning. On the other hand, four and a half of her waking hours could be consumed, when at home, with the task of eating her meals. Another parent dresses her little girl, diagnosed as a victim of the disease referred to as Down's Syndrome, in the very latest fashion. Her clothes are beautiful. She looks adorable. Her mother proudly states she is "no discipline problem." This child, with possibly the highest IQ level in the group, if that means anything, reveals her experiential deprivation and mental isolation by her inability to initiate play activity, to make any personal choices on her own, and in any fashion to become meaningfully involved with individuals in her environment. She appears most comfortable when she is given a secure environment in which she is told each and every activity in which to engage herself. Conformity of behavior within the group is highly satisfactory to this child. It has been a fascinating task to try to prod her into meaningful experiences.

Involving the parents in the learning experiences and progress of development of these children has been a slow and difficult task. The head teacher with the group has had a few highly gratifying results. ---- The open house for parents, one in the fall and in the spring, is one opportunity on our part to assist parents in a realistic appreciation of what their child is doing daily at the school. No attempt is made to present superficial "pretties" made by the children. Rather, we strive to share our philosophy with the parents and enlist their help in what we are trying to accomplish. Our monthly parent meetings have featured such events as talks, "Realistic Goals for Severely Retarded Children," by Dr. Teague, "What Does the Slogan 'Retarded Children Can Be Helped' Mean to You?" by Dr. Hensley, and informal discussions led by other outstanding educators and specialists in the field of mental retardation.

What the Future Holds

These plans are contingent upon a project which is in the hopper for the direction and administration of this particular school, Dale Rogers Training Center, as (a) a training center for retarded children, (b) a teacher-training project for special education teachers, plus (c) a research and demonstration unit, to be assumed by Central State College, Edmond, Oklahoma. If such an affiliation between the existing Dale Rogers Training Center and the college is finalized, we will be in a position for the following named objectives to become realities.

1. Provision of appropriate nurture for retarded children which will provide educational environment for learning experiences which have a role in stimulating development.
2. A theoretical approach to conceptualization in the retarded child. Interpretation of behavioral patterns in terms of a developing self-concept.
3. Careful selection of learning materials
4. Implementing the findings of the Child Study Center, Oklahoma Medical School individual cases; utilizing the findings of the neurologist and the pediatrician.
5. Observing and stimulating development of a child during a one, two, or even three year period pending his residential placement in a state school, thereby arriving at prognosis and diagnosis.
6. Early identification of severely retarded children.
7. Research.

Gladys Hiner, Director of Training, Dale
Rogers Training Center, Oklahoma City,
Oklahoma

A PROJECT TO ASSIST PUBLIC SCHOOLS TO MEET SOME OF THE MAJOR REHABILITATION NEEDS OF THE MENTALLY RETARDED

A. P. Jarrell

During the past twelve years, your President, Dr. Mamie Jo Jones, has developed in Georgia a program for exceptional children which is the envy of many states in this nation. She recognized a need for joint planning and cooperation between special education and vocational rehabilitation several years ago and encouraged the Georgia Vocational Rehabilitation Agency to participate in a secondary educable mentally retarded program.

The Georgia Rehabilitation Agency, like most other Divisions of Vocational Rehabilitation in the country, had been providing services to a limited number of mentally retarded individuals. However, urbanization and automation in our state had increased the need of the mentally retarded for vocational rehabilitation service. These sociological and economic changes began to be reflected in a substantial increase in the number of clients referred to the Agency on the basis of mental retardation.

The Division of Instruction in the Department of Education was in the process of developing secondary EMR programs in the public schools. The Division of Vocational Rehabilitation was in the process of developing a state-wide program of services for the mentally retarded. Since there was a mutual feeling that special education and vocational rehabilitation shared a responsibility for the vocational adjustment of the mentally retarded, the Vocational Rehabilitation Division obtained a grant from the Office of Vocational Rehabilitation in 1961 to help finance "A Project to Assist Public Schools to Meet Some of the Major Rehabilitation Needs of the Mentally Retarded." Mr. William A. Crump, Supervisor of Vocational Rehabilitation Services for the Mentally Retarded, was appointed supervisor of the project.

Project

The broad objective of this project is to demonstrate the effectiveness of the provision of vocational rehabilitation services to selected mentally retarded clients concurrently with other secondary educational experiences on a state-wide basis. Since the vocational rehabilitation of the mentally retarded is a state and community problem, rehabilitation services are provided in cooperation with the services for exceptional children, local school systems, and other agencies and organizations interested in the education, vocational training, and vocational rehabilitation of the mentally retarded on both state and local levels.

The project anticipates that assistance provided the public schools by consultants from the Vocational Rehabilitation Agency will result in: (a) the cooperative evaluation of existing community programs for mentally retarded youth, (b) the projection of programs to provide the unmet prevocational and vocational needs of pupils in secondary programs, (c) the vocational appraisal of pupils beginning at age 14, (d) the enrichment of curriculum through work-study programs, (e) the utilization of all community resources, (f) the involvement of the local counselor of the Vocational Rehabilitation Agency to a greater extent in the vocational rehabilitation of the mentally retarded, and (g) the vocational rehabilitation of a larger group of mentally retarded individuals.

Methodology

This project is based on the premise that counselors in the regular phase of the program can provide vocational rehabilitation services to the mentally retarded when they have assistance at critical points in the rehabilitation process. Evaluation and prevocational training seem to be two of these critical points. Project personnel concentrate on these two areas.

The project features the organization of a state-level resource committee, the expansion of existing local advisory committees to constitute local resource committees, the development of training stations within the school and out in the community, and the provision of the following vocational rehabilitation services through vocational rehabilitation consultants to mentally retarded pupils who are 14 years of age and above: vocational appraisals, medical and psychological evaluations, pupil and parent counseling, and prevocational training. As the pupil demonstrates through successful experiences in a variety of school and commercial training stations that he has potential for becoming a productive worker, the local vocational rehabilitation counselor accepts the case at age 16 or above. When the pupil completes his secondary school program, the local counselor provides specific vocational training, job placement, and follow-up.

When the project was initiated in 1961, seven school systems were selected to represent urban, semi-urban, and rural areas. These systems were selected on the basis of the following criteria: a functional elementary program for the mentally retarded, adequate staff, favorable attitudes toward the mentally retarded in the school, acceptance on the part of school administrators, and a readiness for developing a secondary school program.

Specific Roles and Responsibilities

The project supervisor - Liaison between the Division of Vocational Rehabilitation and the Division of Instruction is provided by the project supervisor. He supervises project personnel and secures guidance for the project from members of a state level resource committee which is composed of representatives from all other divisions, agencies, and organizations which have an interest in or a responsibility for the mentally retarded.

Vocational rehabilitation consultant - A geographical area which contains school systems enrolling approximately one hundred mentally retarded pupils who are at least 14 years of age or above is assigned a vocational rehabilitation consultant. Working through the school administrators and with the local coordinator of special education, the consultant assists in the expansion of the existing local professional advisory committee to form a resource committee.

Resource committee - Representatives from education, health, welfare, civic clubs and from the Georgia Association for Retarded Children were invited to serve on this ad hoc committee. Among the many functions of this committee, the following have been most valuable: evaluating community services available to the mentally retarded, assisting in educating the community with regard to the potentials of the mentally retarded, identifying businesses which have jobs that can be performed by the mentally retarded, and assisting in securing prevocational training stations in these businesses. A state-wide resource committee with similar representatives provides state-wide guidance for the program. This committee meets annually. However, personnel in the project receives counseling and guidance from the individual members as the need arises.

The teacher - As the teacher identifies pupils who might benefit from the services of this project, she provides objective records, completes a subjective appraisal form on the pupils, and refers them to the consultant. She structures class activities and makes assignments on school work-in training stations that will help solve problems of the pupils which are identified in the vocational appraisal report and subsequent training stations.

Vocational appraisal - In an effort to appraise the pupil's potential for benefiting from vocational rehabilitation services, the vocational rehabilitation consultant reviews school records, the teacher's appraisal, interviews the pupil and his parents, administers vocational tests, and secures current intelligence and projective test results from a clinical psychologist. Test scores, impressions, and all available information are analyzed by the consultant, with the object of determining their implications for the pupil's rehabilitation. This information with its implications is incorporated into a vocational appraisal report. The vocational rehabilitation consultant provides the teacher with a copy of this report and suggests experiences which hold promise of improving the pupil's vocational potential. Home visits are made, and parents are counseled with reference to realistic vocational objectives for their children.

Exceptional child consultant - As pupils who are participating in the project became ready for school work-in training stations at age 14, the Division of Instruction and local school systems with consultation from the Vocational Rehabilitation Agency developed a secondary EMR prevocational curriculum outline. This outline provides pupils with structured learning situations to promote levels of proficiency in the social, academic, and prevocational areas in equal proportions with a lack of over-emphasis on either.

Prevocational training - These school work-in training stations are established under the supervision of school personnel who provide selected experiences to promote the development of good worker traits and skills. Some of these stations include: custodian's assistant, cafeteria worker, ground keeper's assistant, teacher's aide, librarian's helper, and administrator's aide. Outlines for these experiences are developed locally with consultation provided by the Division of Instruction and the Division of Vocational Rehabilitation. School work-out training station guides have been developed by vocational rehabilitation representatives with consultation from teachers, coordinators, and consultants from the Division of Instruction. Guides have been developed for a number of school work-out training stations including: attendant to invalid and aged, cafeteria worker, service station attendant, florist helper, mechanic's helper, and others.

In both the school work-in and school work-out training stations, the pupils are rotated at periodic intervals in order that they may receive many of the experiences which will meet their individual needs. These varied experiences are provided in an effort to develop basic worker traits and skills, favorable attitudes toward work, and evaluate the pupil's vocational potential.

The pupil is in the school work-in program from the age of 14 to 16. When he reaches age 16, he is considered for the prevocational training in commercial establishments in the community. These training stations are located with the help of the local resource committee, the teacher, and the vocational rehabilitation consultant. In some instances these students receive wages and in some instances no wages are paid. However, the pupil does receive school credit for successful experience in the training station. As he receives experiences through six to twelve training stations, the vocational rehabilitation consultant, counselor, parents, and pupil can better determine the pupil's specific vocational objective.

Local vocational rehabilitation counselor - When the pupil-client demonstrates that he has vocational potential, the teacher and the vocational rehabilitation consultant discuss the case with the local vocational rehabilitation counselor and transfer to him all available case materials and information. The final decision as to acceptance of the case for vocational rehabilitation service rests with the vocational rehabilitation counselor. However, we feel that rejects will be rare. As a matter of fact, every pupil who has been recommended thus far has been accepted by the local counselor. After the counselor accepts the case, he is authorized to provide physical restoration, specific vocational training, or any other vocational rehabilitation service, even while the client is still enrolled in school. The consultant and the resource committee continue to be available to assist the counselor in securing training stations, job placement, and follow-up.

Results

A formal agreement between the Division of Vocational Rehabilitation and the Division of Instruction was developed and approved by the directors of both divisions.

During the first 21 months of the project, many services were provided. As of

March 31, 1963, 608 pupils had been referred to the project. Of this number, 465 had received a vocational appraisal; 14 had received workshop evaluation; 136 were in training stations within the school; 36 were in training stations in the community; and 48 had been transferred to local counselors.

An economical group accident insurance plan was developed for pupil-clients who receive prevocational training.

Concepts and policies have been revised. For example: a forty year old practice of the Georgia Division of Vocational Rehabilitation was changed to permit the provision of vocational rehabilitation services while the pupil is attending school. Prior to this time counselors began planning with handicapped pupils during the senior year of high school.

The project stimulated interest in one community to the extent that community leaders identified the need and made plans for a multi-disability type workshop which can be used for work evaluation.

After the project was initiated in the seven selected school systems and began to function, additional school systems requested the services that were being provided through this demonstration project. These requests have resulted in an increase of vocational rehabilitation consultants from three to five and an increase in the number of systems from seven to eleven.

In an effort to provide regular counselors with orientation in the techniques of working with the mentally retarded, the Division conducted an in-service training program which involved all professional personnel. It is felt that this orientation will give the counselor more confidence in working with this disability group. This training is already bearing fruit since it is quite evident that more interest has been manifested by counselors as a whole. For example, 78 counselors in Georgia are working with 1,045 mentally retarded clients -- 852 referred cases and 193 active cases.

As pupils began to participate in prevocational training stations in the community, it became apparent that many of them needed more intermediary experiences that would better prepare them to function in commercial establishments. With this in mind, the Division of Vocational Rehabilitation developed a prevocational evaluation and training center for the mentally retarded in Atlanta. This center contains four prevocational training stations -- a commercial-type kitchen and cafetorium, a five room home and personal service unit, a general shop, and an automobile service station. Pupils will attend school part of the school day and receive prevocational evaluation and training at the center the other part of the school day. These training stations will be used to confirm stated and tested interests of pupils, provide them with actual work experience, develop basic worker traits and skills, and permit vocational rehabilitation and school personnel to determine more specifically the type of prevocational training stations to which pupils should be assigned in the community. This facility will open on April 22, 1963.

We in rehabilitation feel that the working relationship developed through this project has many tangible as well as intangible values. We believe that the schools and the personnel in the program for exceptional children concur in this belief, for in a speech at the National Rehabilitation Association Meeting held in Detroit, Michigan, on October 23, 1962, Mrs. Sara Readling, former consultant in the Program for Exceptional Children, said, in part:

> The joint planning and working together of these two agencies have brought new hopes to many EMR students, their teachers, and their parents. With continued efforts, the provision of additional funds for personnel and services, and constant evaluations of course and training stations for needed changes, Georgia's mental retardates can look forward to more adjusted and productive lives.

A. P. Jarrell, Director, Georgia Division of
Vocational Rehabilitation, Atlanta

CURRICULAR PROVISIONS FOR THE GIFTED: MANDATES

Vernon L. Johnson

The generally accepted broad definition of curriculum is so inclusive that a comprehensive discussion of curricular provisions would obviate the necessity for other presentations from this panel. Difficulty is experienced when an attempt is made to separate curricular provisions and administrative provisions because operational procedures for instructional programs are often described in terms of administrative arrangements.

If identification is defined as the process of finding those students who meet the criteria of giftedness as adopted in a given school or educational unit, then the curriculum could be defined in a narrow sense as the educational experiences uniquely or predominantly suited to the persons so identified. In this presentation, therefore, curricular provisions for the gifted will be defined as the planned, purposeful sequence of learning experiences that are designed to achieve well defined educational objectives.

The widely accepted general objectives of education assume a common starting point for all children. The fallacy of this assumption is readily apparent when consideration is given (a) the distinguishing mental and behavioral characteristics of gifted individuals, (b) the adult social roles the gifted tend to assume, and (c) the contributions which the gifted can be expected to make in a rapidly changing world. These individuals bring so much more to the learning situation that optimum development cannot be assured simply by a slight extension of the common educational objectives and a slight modification of educational procedures.

The development of a differentiated curriculum is an important mandate in the provision of educational experiences for the gifted. Planners of these programs are faced with the necessity of designating a pattern of educational experiences which will meet the distinguishable needs and abilities of intellectually superior and talented persons. The general program of education has been changed repeatedly by factors such as developments in society, changes of goals, pressures and threats that are brought to bear upon schools, and the opportunities that open in vocational fields. These factors must be considered in the development of appropriate experiences for the gifted. The continuous ferment in curriculum development and improvement emphasizes the need for unique educational experiences which, by definition, are beyond the reach of and not appropriate to the capacities and needs of persons not exceptionally endowed with potential for learning and productive or creative behavior.

A corollary mandate to the development of a differentiated curriculum is the need for a particularization of objectives. It is essential that a set of objectives or process goals be formulated. These particularized objectives must be in harmony with the general objectives of education, but significant particulars must be identified as pertinent to the identified persons. This is not an easy task, for many of the desirable end-products of special education of the gifted do not lend themselves readily to precise formulation. Nevertheless, the objectives must be stated as clearly as possible since they will provide the bases for subsequent evaluation of the program.

No attempt will be made here to spell out the content for the various subject areas and grade levels or of special courses or curricular tracts. This is the responsibility that is best met by local initiative and resources. There are few single experiences and no whole patterns which can be pointed to as required by known biological or psychological characteristics of gifted persons, or as universally applicable to these individuals. An effort will be made to delineate some principles that will help planners to avoid the confusion sometimes found in the utilization of piecemeal and patchwork practices for curriculum development.

One of these is the principle of relative uniqueness. If a given experience (activity, assignment, enrichment unit, elective course, prize competition, etc.) is to be considered as comprising an element in the differential education for the gifted, it must be distinctive in nature, as distinctive, if you please, as are the qualities of mind and of the social role typical of the gifted. The special curriculum must deviate from the normal one. Since the content of the curriculum that is designed for pupils in the middle range of abilities is but a narrow sampling from the areas of accumulated knowledge, content for the gifted may well include many new and different materials. The search is for a sequence of experiences extending over the full range of school years and carrying into every major field of knowledge that can be purposefully represented in the school curriculum. This search is the most formidable challenge facing planners for educational experiences.

In the particularization of objectives, four ideals are suggested. One is education for life-span. Education can and should be planned as integral to the entire life career of the gifted individual. Fuller sequences of subject matter and broader ranges of the accumulated mass of human understandings can be provided. Another ideal is education for citizenship and aptitude development. This dual problem exists with persons whose intellectual profile is marked by extreme specific peaks. There must be general education for the functions expected of all and special education for the peak behavioral potential. Since this cannot be done by the general curriculum, the need for a differentiated curriculum is mandatory. A third ideal is education for reconstruction. Some experiences indicate a need for the creative re-working of things as they now are, as distinct from simply working within the bounds of objects and ideas already realized. A fourth ideal is education for universal perspectives. The rapidly changing world requires that education do everything possible to prepare for broader degrees of tolerance and acceptance on the part of prospective leaders.

A third broad principle is the particularization of content. Any segment of knowledge not normally required or provided for children in general but which can be adjusted to the curriculum is potential subject matter for enrichment. Such widely diverse areas of human endeavor as the arts, the humanities, social interaction, the natural sciences, languages, mathematics, and manipulative skills offer an almost unlimited number of chances to provide for the gifted new knowledge, new skills, and new opportunities for creative endeavors in keeping with their abilities.

A fourth principle is the particularization of method. Instructional methods should be based on the application of the fundamental principles of learning. The gifted should be in an educational environment characterized by an intellectual climate where excellence of performance is expected, recognized, and rewarded; where excellence relates to all aspects of ability; and where criteria of performance are developed in terms of effectiveness. Individualization of instruction and a wide range of suitable materials are also necessary. Where appropriate, provisions should be made to assure opportunity for self-selection of content, self-direction of activities, and self-evaluation of accomplishments. Methods should vary with the grade level, human and material resources, specific objectives, and the characteristics of the group. Devices such as large blocks of time, team teaching, nongraded classes, and programmed learning should be considered in determining the appropriate approach. Any method used should encourage such activities as critical thinking, problem solving, independent study, the performing arts, social leadership, and the expression of creativity.

The use of these principles with the appropriate administrative practices and organizational patterns will insure a different order of education. Piecemeal and patchwork adaptations of the regular curriculum will not suffice. Enough evidence is available from observed practices and programs in schools throughout the country to demonstrate the feasibility of providing educational experiences that are appropriate, both in scope and sequence, to the characteristics and abilities of the gifted.

Vernon L. Johnson, Director, Area of Special Education, State Department of Education, Nashville, Tennessee

PRESIDENT'S ADDRESS: THE COUNCIL IN ACTION

Mamie Jo Jones

(The President's Address appears in its entirety in Exceptional Children, September, 1963, Volume 30, Number 1, pages 33-38. The following is a summary of her remarks.)

Pointing out that the central focus of The Council's program and activity has always been the exceptional child and his needs, Dr. Jones discussed The Council's government and structure, committees, special projects, present needs, and future.

Emphasis was placed on the responsibilities of the individual member. In her concluding remarks, Dr. Jones stated:

> I like to think of The Council as a process organization -- one which is in action while keeping focus on the exceptional child. But as you know, The Council is made up of individual members and, consequently, is dependent upon the number of people who are themselves in process.

She stressed that the concentrated and consecrated effort of the individual member is required to keep The Council moving ahead and to increase activities in light of today's knowledge and The Council's goals.

Four ways were cited in which individual members can help determine effective Council government: (a) keeping informed regarding Council activities, (b) the careful selection of representatives to the delegate assembly, (c) the wise choice of leaders for the executive committee, and (d) communicating ideas to representatives.

Mamie Jo Jones, President, The Council for
Exceptional Children, and Coordinator,
Services for Exceptional Children, State
Department of Education, Atlanta, Georgia

TWO EXPLORATORY STUDIES OF PREFERENCES FOR SPECIAL CLASS TEACHING

I. Psychological Needs and Preferences for Teaching Various Types of Exceptional Children

II. The Relationship of Ability, Creativity, and Psychological Needs to Preferences for Teaching the Intellectually Exceptional

Reginald L. Jones and Nathan W. Gottfried

Summary

Two studies of preferences for special class teaching have been made: Study I explored the relationship between psychological needs and preferences for teaching several types of exceptional children; and Study II related psychological needs, creativity, and ability to preferences for teaching mentally gifted and mentally retarded children. Subjects of the studies were 726 students and practicing teachers comprising the following groups: (a) freshmen and sophomore college students preparing for regular classroom teaching, (b) students preparing for special class teaching, (c) practicing regular classroom teachers, and (d) practicing teachers of the educable mentally retarded.

Through ranking, subject preferences for teaching various types of exceptional children were determined. Subjects having high or low preferences were further studied using one or more of the following psychometric instruments: Edwards Personal Preference Scale (measures psychological needs), Teacher Preference Schedule (measures gratifications fulfilled by teaching), SCAT (from which Total Score was used), and two tests from the Guilford creativity battery -- Pertinent Questions, and Alternate Uses.

In Study I, the scores of subjects having high preferences for teaching certain exceptionalities were compared with those of subjects having low preferences for teaching those exceptionalities. The relative magnitude of certain psychological needs (or gratifications) associated with high preferrers was also studied. Lastly, the patterning of needs within high preferrers was investigated, using factor analytic techniques. The results showed that definite psychological needs are associated with preferences for teaching certain exceptionalities. This fact was demonstrated in the study of the need patterns of high preferrers in the study of extreme groups of preferrers and in the psychological need patterns of high preferrers highlighted by factor analysis. The results have been treated cautiously, however, because of the small numbers of subjects preparing for, or engaged in the actual teaching of exceptional children. Nevertheless, these exploratory data suggest a number of leads to be followed up with larger and more well-defined samples.

Study II showed that definite patterns of needs and unique cognitive patterns were associated with preferences for teaching gifted and retarded children. Again, follow-up with larger, well-defined samples (especially practicing and prospective teachers of these exceptionalities) was indicated.

Although exploratory, we should like to reiterate that the study of preferences for special class teaching from the perspective of formulations based on psychological needs (and on other noncognitive as well as cognitive attributes) may help to explain preferences for teaching exceptional children. This approach may also help to account for satisfaction and competent performance in the teaching of exceptional children -- problems of great interest to special educators.

(Copies of the complete paper may be obtained from Reginald L. Jones, Instructional Research Service, Miami University, Oxford, Ohio.)

Reginald L. Jones, Research Assistant Professor, and Nathan W. Gottfried, Assistant Professor, Miami University, Oxford, Ohio

EDUCABILITY: A CASE OF THE WONDERLAND SYNDROME

Thomas E. Jordan

Progress in education has come about by a general process of accretion. Each generation of teachers conveys the experiences and observations of daily practice to would-be teachers; school administrators add new insights to old as they face the complexities of organizing instruction. Sometimes, as in the case of administration, tools are adopted which bring a fresh perspective from the social sciences to illuminate the elements of daily experience. A rare source of new insights is the development of a totally new concept of instruction or a technological discovery which renders current practice obsolete. The reason this is rare is that teaching children is an old and stable practice in which the critical elements continue to be children, in their complexity, and teachers, with their stolidity.

Of late education has been assaulted by vendors of panaceas. The behaviorists have offered us teaching machines, which now are added to a long list of innovations beginning with the Lancastrian system of instruction. It recently appeared, mutatis mutandis, with the title, "team-teaching." It seems there is little new under the sun, and the daily activities of instruction will continue much as they have done since Herbart's pedagogy was new. Teachers will continue to instruct children in light of their own careful thinking, attempting to upgrade practices as innovations permit. Of the two considerations just offered, reflection on the part of teachers and innovations of a technical nature, the first seems most promising -- ideas and the reflective process in the minds of teachers.

This paper will consider one idea used in educational practice -- educability -- and examine it with a view to evaluating its contribution to special education activities. The general approach will be to consider the current menaings of the term, to consider the ways in which a concept can be formulated, and to suggest some desirable innovations.

There is a passage in that most serious of humourous books, Alice in Wonderland, in which the King of Hearts makes a remark to Alice which can help us explore educability. Presiding at the trial, the King points out the value of being vague about meaning: "If there's no meaning in it," said the King, "that saves a world of trouble, you know, as we needn't try to find any." Our use of the term educability at times has the disarming simplicity of the King's observation. In such instances we recognize that we have a term but recognize no limitations on our activities as a consequence. Having no compelling meaning a term need impose no imperative guidance on our practices. In that sense educability is sometimes joined by concepts such as professionalism and retardation, which are vague elements in the lexicon of education.

Let us now consider some formulations of the term educability. There is the synoptic approach to linguistic content which conveys a broad range of meanings. The State of Washington has a legal definition of educability which touches on many aspects of child growth (Strother and Lippmann, 1963). It covers the following areas of child growth: social competence, emotional stability, self-care, vocational considerations, and intellectual development. In this usage educability is a condition whose meaning reflects the broad range of considerations in current curricular theory. The Washington State definition is distinguished by its attention to the scope of curricular theory, and its meaning is almost entirely a reflection of school- rather than child-centered considerations.

Another form of meaning encountered in current usage is psychometric. The term "educable" is applied to children who achieve a prescribed score on a mental test. The term follows the test performance, and its connotations are psychometric. For example, we often find an "educable" child defined as one who has an IQ of 50, that is, one who has psychometric strengths and weaknesses which when summed and converted yield an IQ of 50. The educability is defined as a consequence of a psychometric cut-off score. The specific psychometric cut-off score is itself not particularly justified. Again, we return to Alice and the trial conducted by the King and Queen of Hearts. "No, no!" said the Queen. "Sentence first -- verdict afterward!"

Both the psychometric and the curricular definitions of educability can be classified under a more general heading. They can be arrayed next to other educational constructs which deal with inferred properties of human beings. The general class to which all such terms belong may be termed potential. That is to say, their meaning does not relate, as the linguistic philosopher A. J. Ayer (1952) would put it, to the realm of empirical propositions. Meaning in an empirical sense is avoided for meaning in a tautological sense; i.e., there is no external referent by which terms are defined. The reason for this has been the lack of direct knowledge of lower limits in children to the acquisition of verbal skills and concepts. The unhappy consequence of the use of potential as the key in assessing meaning has been the implicit invitation for all kinds of people, outside of teaching, to render opinions on the educability of children. Psychologists who have never taught, indeed "test-givers" (at best) have been free to make solemn pronouncements about concepts whose full meaning they perceive only faintly.

Basically, educability refers to a set of empirical properties of a child, components of his make-up. In deciding the range of issues to be covered in a pronouncement on educability we should, I believe, begin and end with children. We should stray only to the extent that we consider overt behaviors undertaken by children and then only to avoid the use of potential rather than actual considerations.

Let us now try to establish some guides for the formulation of a decent concept of educability. A logical place to begin is with a commitment to properties of children. We should make sure that our formulation uses words that relate primarily to children. In so doing we may proceed logically to recognize that some properties or attributes of children are fixed. These are exemplified by such things as sex, fingerprint patterns, eye and hair color. Other properties of children are often misperceived as fixed, but being in the oldest sense of the word accidental, they are more modifiable. The quality of intelligence so vital to determining educability is often misconstrued as a fixed (ontological) property. It is in fact a functional (accidental) property with obvious implications for a concept of educability.

To summarize so far we may say that a concept of educability should relate to empirically defined, largely functional, qualities of children.

We may also say that a good concept of anything -- in this instance educability -- should allow us to discriminate empirically within and between classes of events or objects. A rational concept of educability covers all children up to and including the most gifted. Having postualted the educability of some, we must also consider the ineducability of others. Normal thinking about the two terms implicitly deals only with the retarded; it also slights ineducability and goes prematurely to trainability. In fact, training and educating the retarded follow dissimilar curricular patterns which further shows the lack of rigor in conventional usage of the terms. Ineducability is also a residual concept, generally speaking, even though the children are defined by a discrimination process, i.e. by being excluded from the class of children who are educable.

In school practice we need to know clearly who are educable and who are not. This discrimination needs to be clear. At this point we need to re-examine previous mention of fixed and modifiable traits of children. Too often we think that intellect is a fixed trait and believe our discrimination process must also result in an immutable diagnosis. In fact, the relevant traits of children are not immutable. Intellect is plastic -- within limits; motivation is certainly not innate, and the crucial matter of orientation towards self-help is demonstrably determined by factors outside the child. These qualities, all of which are relevant to educability, are very much within the scope of parental determination, and environmental influence (Semmler and Iscoe, 1963). The implication of these observations is that a concept of educability based on fluid properties of children must also reflect fluidity. That is, while the concept must be phrased in a self-consciously correct way, its content or meaning must be as flexible as the elements of child behavior which are its referents. The concept should convey fluidity if the relevant behaviors are modifiable. The concept "learning ability" as studied by Semmler and Iscoe (1963) changes with age in children. Learning ability, i.e. acquisition of verbal materials under standardized conditions, is a behavioral domain with obvious relevance to educability. Our concept should reflect experimental evidence that learning ability is subject to change with the passage of time. (See also Kirk, 1958.)

Another summary is now in order. This presentation has attempted to show that there are ways to sharpen the meaning of concepts, in this instance the vital concept educability. Much of the uncertainty surrounding educational terms arises from the aversion to theory in special education circles. Concepts and their structure are a theoretical problem. Traditionally, we have subscribed to the point of view Alice encountered in Wonderland when she met Humpty Dumpty: "When I use a word," Humpty Dumpty said in a rather scornful tone, "it means just what I choose it to mean -- neither more nor less." In this presentation the Wonderland quality of our terminology is recognized. So far we have said that: (a) reflecting on concepts is a source of innovation in education practice; (b) meanings should relect empirical considerations.

There now remains the task of adding two more items to the specifications for constructing a coherent concept. One is a specific list of child behaviors from which a concept of educability may emerge. Essential behavior areas are: (a) motivation (striving for self-help and independence), (b) interpersonal relations (vitiated by teaching machines?) (c) emotional balance, and (d) communication skills. The other is specification of a task or set of tasks for which the functional traits just listed may act as a matrix. This is the topic for an entire presentation since it is complex. Essentially I should like to see a child's educability exemplified in a nuclear fashion as he acquires, transfers, and retains verbal materials with a high degree of curricular validity. The referent for curricular validity would be an explicit course of study. Should it be a regular or special curriculum? To adopt a special education curriculum would be to fall into the fallacy of begging the question. This is the case since the relevance of a special curriculum arises after educability has been decided.

The act of deciding whether a child is educable or not becomes a matter of using empirical means, largely behavioral, to gather relevant information. Once data have been gathered from a carefully structured one-subject experiment (the case-study) on actual learning they are to be interpreted by an educationist. The interpretation will be made by putting data into various situational matrices, e.g. the two-person group of child and clinical teacher, the four or five-person group of classroom instruction. Relevant data on social development, toilet training, language, and so forth can also be placed in this matrix. In the last analysis the educator makes a pronouncement on educability which is valid (empirical validity and construct validity). This procedure is suggested not because it uses the technology of social science but because it uses educational thought as a guide. Too often a poor concept is protected by good psychometrics. In fact, the educational construct should come first, and evaluative procedures should follow. They are only the deductive means to aid the educator as he applies an educational construct -- educability -- to child behavior. The focus is the idea in the educator's mind -- the concept of educability.

The exclusion of a definition of educability from this paper is conscious and deliberate. Definitions are ill-used in educational practice and theory. Special education has a great deal of difficulty with definitions of mental retardation because it is presumed, rashly, that everyone knows what a definition is. Actually, definitions play many roles, have many functions, and are the subject for an entire presentation (Jordan, 1962). In this paper, the seductions of a simple definition are sternly avoided. It seems more suitable to discuss the blueprints for a rigorous concept than to add one more to the list. In this instance discussing the nature of a concept of educability, with passing reference to the pragmatic aspects, is the appropriate exercise.

In summary, attention has been drawn to the less than rigorous use of concepts in special education. As in Wonderland, words have a bad habit of meaning only what their users happen to want them to mean, "neither more nor less," as Humpty Dumpty put it. Future developments in special education will depend on a more calculated approach to terms and concepts. Refinement in practice will follow refinement in language and thought. Clear thinking in special education, as in any other venture, is as clear as the concepts which form its content. Let us be sure that educability is the first -- but not the last -- concept to be examined critically and sympathetically.

References

Ayer, A. J. Language, Truth and Logic, Dover Publications, 1952.

Carroll, L. Alice in Wonderland, Sears and Company, 1920.

Jordan, T. E. The Pseudoproblem of Definition in Mental Retardation, Unpublished paper, 1962.

Kirk, S. A. Early Education of the Retarded, University of Illinois Press, 1958.

Semmler, I. J., and Iscoe, I. Comparative and Developmental Study of the Learning Abilities of Negro and White Children under Four Conditions, J. Educ. Psych., 1963, 54, 38-44.

Thomas E. Jordan, Director, Center for
Teacher Training, Tulane University, New
Orleans, Louisiana

DISCUSSION OF THE POSSIBILITIES OF USING A CLASSROOM AS A SETTING FOR IMPARTING A STRATEGY TO AID EDUCABLE RETARDATES TO TRANSFER LEARNING AND/OR SOLVE PROBLEMS

Paul J. Katz

An understanding of conceptual processes is of considerable importance if educators are to evolve an ideal curriculum for the mentally retarded -- one truly meeting the needs of this group. The most widely held view on the conceptual and learning characteristics of the retarded is that their abstraction capacity is, at best, quite limited. Scheidemann (1931) with finality decrees, "Judgement, the capstone of reasoning, is not encountered in any type of feebleminded" (pp. 58-59). Ingram (1935), Baker (1953), Garrison (1950), and Fernald (1943) have each said this in their own way. These statements made on the basis of subjective observations, opinions, and IQ data have served as a foundation for those who have undertaken to construct curricula for mentally retarded children.

This type of thinking has been responsible for many glib cliches referring to the characteristics of mentally retarded children. Until educators gain more knowledge about the learning characteristics of mentally retarded children, they will remain in the same position that Itard, Decroly, Montessori, and the other pioneers in the field found themselves. Their programs were based upon a philosophy that had little foundation in empirical information. Many programs today have not exploited the additional sophistication provided by researchers since the days of these early workers. Programs have been geared to imparting habituated responses to specific situations.

The philosophical orientation of many of the curricula being used with the retarded in this country are founded on specific training in various jobs or occupational areas. The school systems of New York City, Detroit, and Rochester have been among the leaders in developing this concept. This thinking appears to be influenced by Thorndike's (1913) original work in creating the theory of transfer of identical elements. It asserts that training in one activity influences another activity only insofar as the two activities have elements in common. By following this principle of learning, the instructional program becomes geared to train pupils to obtain service jobs in the community, and the courses are designed to train the pupils in specific tasks rather than generalizations. As the present curricula are built upon the premise that the retarded can transfer only identical elements, programs have led to specific training towards vocations such as bus boy, tray girl, filling-station attendant, to name a few. Educators have neglected the possibility that the retardate can generalize and/or improve in his capacity to adjust to different or new situations and problems.

As time goes on, preparation for the specific skills of a given job are being taught in industry, and large corporations are establishing facilities in which to train workers. According to Clark and Sloan (1958) business and industry want the public school to provide training in the basic skills of language and number and in general methods of work so that those who seek jobs will be well grounded in these areas. With this in mind, perhaps educators should attempt to develop a generalized ability on the part of retarded pupils to adjust to different circumstances. If it is true that retardates show difficulty in generalizing from one situation to another, then it may be possible to compensate for this difficulty by establishing a procedure, a method, or a strategy that the pupil may learn to use when faced with a new situation. According to Klausmeier (1961), a main reason for formal education in school is to facilitate learning in situations which are outside the school.

Recently there have been many studies (e.g., those by Johnson, Cruickshank and Blake, Tizard and Loos, Cantor and Barnett, etc.) re-evaluating the ability of the retarded to transfer learning. McGeoch and Irion (1952) describe transfer of learning in the following terms: "Transfer of training occurs whenever the existence of a previously established habit has an influence upon the acquisition, performance, or relearning of a second habit. It is one of the most general phenomena of learning and, by means of its influence, almost all learned behavior is interrelated in various complex ways."

Within the last few decades sufficient evidence has been gathered to permit transfer of learning to be analyzed and defined. It would be unrealistic, at this time, to describe all the research done in the area of transfer of learning with normal subjects. However, findings indicate that teaching which is directed at the pupils' understanding of underlying principles seems to enable those pupils to transfer their learning to new and unique situations with greater facility than pupils who have learned the same principles in a mechanical or rote fashion. Whether the desired outcome is a skill or a method of learning, it is desirable to help pupils understand the underlying generalizations. Though acquiring the generalizations usually takes more time than does proceeding by rote memory, transfer to new situations is improved. When a student encounters a new situation, he sees greater possibility for applying the varied responses by which a broad generalization was derived than the more specific responses themselves.

In the area of mental retardation, several studies are of interest in this regard. Griffith and Spitz (1958) found retardates did not actively test hypotheses in achieving abstraction. They used triads of words selected to cover a wide range of difficulties in verbal abstraction, and the study concluded that it may be possible to improve the conceptual behavior of retardates by teaching them tactics which are appropriate to their ability. This study suggests the possibility that abstractive ability might conceivably be increased or enhanced by practice or other means.

To test the Griffith-Spitz hypothesis that conceptual training may be possible in retardates, Miller and Griffith (1961) elicited and differentially reinforced abstraction-relevant and irrelevant associates to words that make up abstraction-sets. While reinforcement and relevancy had no differential effects on abstraction performance, trained subjects performed significantly better on items composed of nouns used in the training, so that training resulted in improved conceptual performance; however, they performed no better than untrained subjects on materials not used in the training. The results of this study tend to support the premise that retardates can form concepts based only on items used in training. This finding may be viewed as in line with the principle of transfer of identical elements. However, it may be noted that possible alternatives to breech the lack of conceptual fluency in retardates, such as teaching a particular strategem to facilitate concept-formation performance, might have yielded more positive results with respect to the generalization of improved conceptual ability to relatively novel sets of stimuli.

In contrast to the verbal concept studies just discussed, several experiments have investigated transfer phenomena in retardates with less obvious verbal materials. In one, Cruickshank and Blake (1956-57) tested and confirmed the hypothesis that the mean performance of mentally handicapped subjects in the transfer of a previously discovered principle does not differ significantly from that of intellectually normal subjects with similar mental age.

Johnson's (1958) recent study on the ability of mentally handicapped children equated for mental age with normal children is optimistic in that his findings show that mentally retarded children can transfer a learned principle better than normal children of the same mental age. These findings were based on specific assembly tasks that required a large measure of motor-sensory coordination and manipulative ability.

Most of the studies just cited seem to indicate that there is fairly conclusive evidence that most retardates have the ability to transfer learning. The variance of opinion centers about the amount and level of that ability.

After doing a survey of the research concerning the learning characteristics of retardates, one is struck with a number of problems. The greatest percentage of the reported research was carried out with institutional populations. These children not only live in a unique environment, but also represent a skewed distribution of the total population of mental retardates. Some of these children have been committed to institutions for reasons other than mental retardation. Many of them were brought to the attention of the authorities for delinquent acts, behavioral deviations, or as a result of dependency. There is a good reason to infer the likelihood of an overlay of psychological problems in addition to mental retardation with this population. Exactly what effect these problems of a psychological nature have on these children is difficult to determine specifically. It would thus seem hazardous to draw generalizations applicable to the retarded population as a whole from data obtained on such a biased and restricted sample.

The review of the literature concerned with this area of research also revealed that the great bulk of these studies were done with individual subjects rather than class units. There has been little attempt to design a course of study and use it in experimental research with a class unit as it exists in the public schools. Most of the work done with groups has been with matched and/or paired groups placed in artificially constructed units. A large number of studies have also been conducted in which training and/or instruction of the subjects has been on an individual basis.

For the most part, basic research in learning is done in a highly molecular framework and by means of exceedingly simple tasks. Findings from the use of mazes, problem boxes, and other apparatus of the psychological laboratory have not been readily applicable to the classroom situation which is primarily concerned with group learning.

Against this background of research done primarily with institutional populations and using individual subjects, I undertook an investigation that suggests an important deviation from current research practice in the area of learning. Existing class units, as they were organized within the public schools of a large metropolitan city, were utilized. It was believed that here it was possible to reach a random sample of a representative population designated "mentally retarded" by a public school system and then segregated for a special education program. The methods utilized could therefore be verified in the classroom where they will ultimately be needed. The necessity for the additional transfer of generalizations, therefore, need not be made from individual subjects to class units.

Since a large portion of our educable population now attends the public schools, it may be productive to study the effects of a program designed to promote the ability of this group to solve problems and transfer learning in an actual classroom setting. With this frame of reference, I chose to examine the possibilities of imparting a problem-solving strategy, using a science unit in magnetism and electricity as a vehicle.

This investigation was primarily concerned with the possibility of providing a strategy of learning which would aid educable mental retardates to transfer learning to unique situations. The study involved the cooperation of 95 male and female subjects from six classes in three academic, public high schools in the borough of Brooklyn. The groups ranged in age from 15 years, 10 months to 18 years, 6 months and had an IQ range of 50 to 75.

Within each of the three high schools, one class was designated control and the other class designated experimental. Two courses of study, consisting of seven 40 minute lessons, were designed for the investigation. The classes were taught the lessons on seven consecutive school days. Both courses of study contained 20 principles dealing with electricity and magnetism. Course of Study Control presented these principles in a way to encourage learning by rote by the 44 pupils who comprised the three control groups. Course of Study Experimental covered the same materials, but in such a way as to give the 51 students of the three experimental groups an understanding of the underlying principles, and at the same time stressed the scientific method as an aid to problem solving. Although this Experimental Course of Study was the heart of the investigation since it imparted the problem-solving strategy, the limitations of this presentation prevent a full description of the curriculum at this time.

The results of the teaching were assessed on the following instruments developed for the investigation:

1. Knowledge of Principles Tests - designed to assess the increment of learning as measured by the acquisition of 20 basic principles in magnetism and electricity
2. Problem Solving Tests - designed to measure the increment in ability to cope with unique problems based upon the 20 principles in the area of magnetism and electricity that were covered in the courses of study
3. New Principles Test - designed to measure the ability to cope with new principles learned at the test situation and apply them to a series of unique problems based upon these principles.

The obtained data appeared to justify the following conclusions:

1. Educable mentally retarded pupils who are taught basic scientific principles are able to demonstrate knowledge of these principles upon examination.
2. Educable mentally retarded pupils who are taught basic scientific principles, regardless of whether or not they are taught such principles by rote or in a context stressing an experimental attitude, do equally well in demonstrating knowledge of these principles upon examination.
3. Educable mentally retarded pupils who are differentially instructed with a curriculum designed to impart a strategy for problem solving based on the scientific method are better able to cope with unique problems based on previously learned principles than are those who learned the principles by rote.

In the course of the present study, the class setting lent itself admirably to the testing of all the hypotheses posed by the study. The use of classrooms should be exploited on a larger scale to test learning theory and curriculum research with mentally retarded children. Although school systems, directors of special education, and supervisors have not always been receptive to educational research conducted in school settings, careful consideration should be given to this phase of educational research in the future since it may prove the most fruitful for all concerned.

An important implication of this study concerns methods of teaching. The experimental and control groups showed no significant difference in their ability to acquire the scientific principles which were taught. However, the Problem Solving test showed dramatically that the control group pupils, who had learned by rote, demonstrated significantly less comprehension or grasp of the underlying principles involved in the unique problems than did the experimental group pupils, who had learned by generalization and with specific training in a strategy for problem solving. The ability of a pupil to verbalize or write a response to a question is not conclusive evidence that this pupil understands the material to the extent of being able to use it to solve problems and to adjust to his environment. Teaching should be geared to understanding rather than repetition and habituation. The teacher has the responsibility for emphasizing those outcomes which have the greater possibility for transfer. Previous discussion has shown that an understanding of the underlying principles involved in a problem and of special techniques for problem solving have greater possibility of transfer to many situations than have specific facts and technical information acquired by rote procedures. Though this method may take more time than does proceeding by rote memory, transfer to new situations is definitely improved.

The results of the study seem to imply the possibility of a more general and flexible approach to the education of the retardate rather than specific learnings based upon rote procedures. The evidence indicates that educable mental retardates can generalize, transfer a principle, and solve problems when they are trained in a specific strategy to facilitate these abilities. Much of the instruction for this group today is based upon transfer of identical elements only. The necessity for including specific working and living experiences in the classroom for the purpose of teaching retardates to use these skills in identical situations in the community may not be indicated. Instruction might be shifted to a general problem-solving similar to that inherent in the Experimental Course of Study, which may then be applied to many varied situations. Specific tasks could be required within the classroom, not for the purpose of learning those specific tasks but rather for learning to apply the skills -- social, vocational, and academic -- to various situations. The implication then is that it may not be important to act out and learn the specific functions of many menial jobs on the occupational hierarchy, but rather to learn certain fundamental skills which have a universal application to many situations.

The results of the investigation appear to bear out the possibility that the educable mentally retarded child has the ability to transfer learning on an abstract basis or, in other words, to adjust. If it is possible to teach the ability to transfer learning to unique situations or, in other words, to solve problems by the strategy implicit in the teaching process, our thinking in the field of mental retardation must shift to the unlimited possibilities for improvement of the retardate by the use of dynamic and imaginative teaching processes.

It is hoped that these findings will cause those changes in the present curricula necessary to account for the ability of the educable mentally retarded to transfer learning and thereby adjust to a new situation by better utilizing previous learning. In Johnson's (1958) terms, "Our aim should be an adjustable rather than an adjusted individual."

References

Baker, H. J. Introduction to exceptional children. (Rev. ed.) New York: Macmillan Co., 1953.

Clark, H. F. and Sloan, H. S. Classrooms in the factories: an account of educational activities conducted by American industry. Rutherford, New Jersey: Institute of Research, Fairleigh Dickinson University, 1958.

Cruickshank, W. M. and Blake, K. A. A comparative study of the performance of mentally handicapped and intellectually normal boys on selected tasks involving learning and transfer. Syracuse University Research Institute, Office of Research in Special Education, December 1, 1956 - November 30, 1957.

Fernald, G. M. Remedial techniques in basic school subjects. New York: McGraw-Hill Book Co., 1943.

Garrison, K. C. The psychology of exceptional children. New York: Ronald Press Co., 1950.

Griffith, B. C. and Spitz, H. H. Some relationships between abstraction and word meaning in retarded adolescents. American Journal of Mental Deficiency, 1958, 63, 247-51.

Ingram, C. P. Education of the slow learning child. New York: World Book Co., 1935.

Johnson, G. O. Comparative studies of some learning characteristics in mentally retarded and normal children of the same mental age. Syracuse University Research Institute, Office of Research in Special Education and Rehabilitation, 1958.

Klausmeier H. J. Learning and human abilities: educational pyschology. New York: Harper and Bros., 1961.

McGeoch, J. A. and Irion, A. L. The psychology of human learning. New York: Longmans, Green and Co., 1952.

Miller, M. B. and Griffith, B. C. The effects of training verbal associates on the performance of a conceptual task. American Journal of Mental Deficiency, 1961, 66, 270-76.

Scheidemann, N. V. The psychology of exceptional children. Boston: Houghton-Mifflin Co., 1931.

Thorndike, E. L. The psychology of learning: educational psychology. (Vol. II.) New York: Bureau of Publications, Teachers College, Columbia University, 1913.

Paul J. Katz, Associate Professor of Education, Trenton State College, New Jersey

GENERAL SESSION IV: REARRANGING OUR PREJUDICES

Samuel A. Kirk

As President Jones has indicated to you, I was president of CEC in 1941. It has been rumored that I have been past president and have attended the President's Dinner for 21 years. I want to make a correction to this rumor, because I wrote to President Garrison in 1960 and retired, after 20 years, as past president. I do want to emphasize that I only held the office of past president for 20 years. Now I am a retired past president. I did this because I hated to hold the same rank for over 20 years without a promotion.

Much has happened to CEC since those days. Much progress has been made. Although your historian could point out to you the progress CEC has made during the last 25 years, I should like to mention a few bench marks of progress.

First, you will notice that there has been definite progress in charm and pulchritude in the selection of presidents. Whereas they selected me in 1941, now we have pulchritude and charm in both the President and the President-elect. I am sure you will agree with me that definite progress has been made.

Secondly, we have made progress in dues. The dues for ICEC, including eight issues of the journal, was 50¢ a year. Now we have progressed to $10.00 a year. The journal isn't any larger now, but I am sure that it has increased in quantity and quality -- of advertising.

Thirdly, at that time the president was required to give his own speech. Now, in the age of automation, the president asks someone else to make the speech. Or is this just typical of the present YOUNGER generation of presidents.

Those of you who have witnessed the growth of special education in this century, I am sure, are proud to be members of a movement that has gradually but surely become a definite part of the education of all children. Special education today is considered not a step child -- or an unwanted child -- but a necessary program in every school system that boasts about the education of all children. To achieve this status we have gone through different stages and different emphases. The three stages we have been going through are (a) identification and diagnosis, (b) organization and administration, and (c) teaching.

Identification, Administration, and Teaching

During the first 50 years of this century considerable concentration of energies was expended on the identification and diagnosis of exceptional children. We have now developed many psychological tests since Binet. We have refined methods of visual screening and visual testing. We have improved methods of testing hearing. We have in general improved procedures for identification of exceptional children. Today, identification of exceptional children is not a major problem, even though we will always find better methods.

During the post-war period, public interest in exceptional children has resulted in considerable legislation which appropriated funds to local school districts for excess cost of educating exceptional children. This has resulted in a second stage of development, the task of organizing and administering programs for exceptional children. This development has resulted in the employment of extensive personnel with the titles of state directors of special education, state assistant directors of special education, state consultants of special education, state supervisors of special education, local directors of special education, local assistant directors of special education, local assistant to the assistant director of special education, local supervisors of special education, assistant supervisors of special education, directors of special services, directors of pupil personnel, assistant superintendents in charge of special services and special education, coordinators of special education, and a host of other titles. This is not an exhaustive list but only a few titles given to people who were asked to organize, administer, select teachers, and handle the public relations problem with the parents and the community.

The duties of these organization men and women, of course, varied, but there were common problems which they faced and attempted to solve. I am sure all of us know that they do not lead a soft life. Their essential duties are: to decide on what is to be done, tell somebody to do it, listen to reasons why it should not be done, or why it should be done by somebody else, or why it should be done in a different way. Then they had to follow up to see if the task had been done, discover that it had not been done, investigate why it was not done, listen to the excuses from people who should have done it and did not do it. Then they had to follow up again to see if the regulations were followed, discover that they were followed but incorrectly, point out how they should have operated, and conclude that as long as they had organized in some way, it may as well be left that way.

And during off hours, usually nights, the organization man considers how much simpler and better the thing would have been done had he done it himself in the first place, reflects sadly that if he had done it himself, he would have accomplished the task in a day, but as things turned out he spent five days trying to find out why it was that it had taken somebody else six months to do it wrong. Then he realizes that had he done it himself it would be highly demoralizing to the staff because it would strike at the very foundation of the belief of all teachers that a director of special education has really nothing to do.

Disregarding these facetious remarks I think we all agree that the organization problem during the post-war period has been a monolithic one and that we have had to use many of our best minds in special education to accomplish this tremendous task.

And now we are beginning a third stage of our development which is emphasizing effective teaching. All of us know that some of the classes we have organized are truly special education classes because the teachers themselves have, through their individual ingenuity, devised effective teaching procedures. We also know that there are many special education classes which are classes, but not special classes, since we have not yet developed a scientific pedagogy and are not using scientific knowledge which we already have acquired.

The reasons for our lack of concentration on the process of teaching is of course obvious. We have expanded faster than we have been able to train personnel. I was called to one state to offer a two-week course on the mentally retarded. This two-week course certified 60 teachers. In another state I gave a three-week course. This course certified 40 teachers. Many of the teachers become certified in a six or eight week summer session course.

I think we should recognize that today we have not been able to produce a sufficient number of highly trained personnel to handle at an adequate professional level the presently organized programs of special education throughout the country. One reason for this professional lag is due to our imbalance in finances. Most states appropriate funds for the organization and financial support of classes in public schools. After finances have been obtained, local school administrators discover that trained teachers are not available. Generally, no financial support is given to colleges for the organization of adequate special training programs. As a result, short, quickie summer school programs are or organized to give an introduction to the problem in order to certify teachers from other areas. Although this is a legitimate beginning, the programs in colleges and universities have been very slow in becoming organized, primarily because special appropriations for teacher training programs were not made. Funds have had to be stolen from other parts of the college or university to operate such a program. And when funds became available the short supply of specialized college teachers in this field became an obstacle to the development of adequate programs.

Except for the efforts of an isolated teacher here and there, serious work on effective teaching procedures in an organized and scientific fashion is not being conducted. A survey of research shows that researchers shy away from the study of the process of teaching. We study the characteristics of the children; we correlate tests' results; we evaluate the results of teaching by giving educational tests. But we seem to avoid the study of the process of teaching. The teaching machine today has forced an application of the principles of learning to the teaching process. But, as many of you know, there are limitations to the use of teaching machines with exceptional children. We can program a course in mathematics, or Spanish, or German, but programming lip reading, or speech, or reading for the deaf is a more difficult task. Programming reading readiness or reading materials for young mentally retarded children is likewise a difficult task. But the principles of teaching through programming, with minimal change, with operant conditioning, with reinforcement and with other factors which facilitate learning or counteract forgetting, are factors that teachers need to produce effective learning.

There is a psychology of learning and an art of teaching. The study of theories and principles of learning does not assure the skill or art of teaching. Ph. D's in learning cannot necessarily teach. But who today is expending considerable time in each of the areas of exceptional children to develop, on a sound and scientific basis, the process of effective teaching ?

My prophecy is that those who make major contributions to the teaching process are going to be the future leaders in special education. I hope that I have stressed this point sufficiently to stimulate some to go into the intensive study of teaching procedures. I predict that the next developmental stage in our field in the next ten years will be, not identification and diagnosis, not organization and administration, but in the development of scientific teaching procedures.

One of the major differences I noticed in Europe, particularly in England and Russia, is the individual effort in improving the instructional process. In England schools are supported federally but the management of the school is a local matter. They do not seem to be standardized in instructional techniques, wherein everyone does the same thing. They are very individualistic. A special school may have a unique process by itself. Numbers of them were working on teaching procedures, not in an experimental way, but on a trial and error basis.

In Russia, where research has very high status, scientists were experimenting with effective methods of teaching. Such a researcher may not be teaching but trying out an idea. As an example, in boarding schools, they found that the children were taking a long time to learn the routines of getting ready for breakfast. They had to dress, wash, fix their beds, sweep floors, and then go to breakfast. One of the difficulties noted by a psychologist who was called in to improve the situation was the inability of the children to learn an efficient sequence of tasks.

The psychologist tried a number of systems. One was effective. He put 10 pictures on the wall, each with a covering flap. The pupil was instructed to look at the first picture, accomplish the task, cover it with the flap and then do the next task illustrated in the second picture, and so on. They said that whereas it took four weeks to teach the pupils to learn the sequence of tasks under personal supervision, the children learned the sequence in 10 days when they used this system. After the ten day period of independent activity the pictures were removed since they were no longer necessary.

We found one person in Kiev, during our visit, who was devoting his whole time to developing materials on a graded basis that would increase the ability of the mentally retarded to think. Brief stories were given and the task of the pupil was to read the story and to give it a title. He had developed a series of books on that basis and was trying out this procedure as a teaching technique for the development of thinking ability.

The point I am trying to make is that in our country few research workers are developing effective teaching procedures. We have much research going on, but it is concerned with characteristics of the children, survey type research, learning experiments for theoretical purposes, and evaluations of the end results of programs. We have very few people studying the process of teaching.

We do have many teachers, who, through intuition, skill, and insight, have developed methods which they use in their own classrooms. Their supervisors or principals tell us that they are good teachers. But when we ask about details and why they are considered good teachers we obtain vague answers. "Their children are happy. The parents like the teacher. The children seem to be learning." But exactly what she is doing and how tends to remain a dark secret. In one school system a teacher was reported to be excellent. Why? How? Nobody knew. She seems to hypnotize the children. They follow her suggestions. It isn't all words -- a gesture, a look. But what is this magnetism? No one in the system or the neighboring university took the time to find out.

And to make things worse the usual procedure we follow when we find a good teacher in a classroom is to take her out of the classroom and give her an administrative job that pays more.

I now come to the major theme of my address -- rearranging our prejudices. Our main job in education is to study the teaching process and to train the best personnel to teach the children. Therefore, the most important ingredient in education is not the superintendent, nor the principal, nor the director of special education, but the classroom teacher. Yet we require less training of the classroom teacher and pay the classroom teacher less than other school personnel. In the field of medicine, the system is just the opposite. The doctor who deals directly with the patient in diagnosis and treatment is the highest trained in the hospital and the highest paid. The hospital administrator is less well trained and paid less. If we were to follow the system used in medicine, and maybe we should, we would operate as follows:

First, train a teacher in a six year college course. Then require the teacher to intern under supervision of master teachers in a number of settings for three years. If the teacher passes the test of a master teacher she is employed as a classroom teacher for a beginning salary of $15,000. If the teacher is unable to pass the test of a master teacher but has some managerial ability, he can be trained and employed as a principal for $12,000. If the principal is not successful as a manager of a school but is adequate in politics and public relations, we can employ him or her as a superintendent or director of special education for $10,000 a year. This system will then provide us with the best teachers for the major job of education. We will thereby reverse our system of using teaching for a few years as a stepping stone to administrative and more lucrative positions.

This proposition though presented with tongue in cheek may not be as ludicrous as it sounds. One school system is now paying the same salary to its best classroom teachers as it is paying to principals and supervisors. And in some universities certain professors are paid the same or higher salaries than their deans. This has led to the story of a women's club calling a president of a university to ask him to make a speech. He informed them that he could not go but he would try to send someone else. They pleaded that he not send anyone lower than a dean. Whereupon the president replied that he had no one at the university lower than a dean.

In closing I should like to say that the teaching process is one of the important areas for development. And in spite of my facetious remarks about salaries, it is going to be necessary to keep in the classroom many who are now superintendents, directors, principals, or supervisors, who have been taken out of their classrooms for administrative positions because they were superior classroom teachers. Teaching in a classroom requires high training and experience and should hold the highest status instead of its becoming a stepping stone for the superior teacher to become an administrator.

Samuel A. Kirk, Director, Institute for Research on Exceptional Children, University of Illinois, Urbana

A VOCATIONAL READINESS PROJECT FOR YOUNG HANDICAPPED STUDENTS IN NEW YORK CITY

Morris Klapper

This session has been organized on the premise that severely handicapped young students have limited opportunity or support in experiencing in their early teens those activities and relationships which allegedly are basic to future vocational adjustment. Rather than attempt to prove the validity of this hypothesis in the few moments available, I should prefer to describe, briefly, one attempt in New York City at filling and evaluating this presumedly serious gap in such students' early development.

Over a period of years it has been apparent to the New York City Board of Education and the New York Division of Vocational Rehabilitation that handicapped students at the upper teen-age young adult level were woefully unprepared for vocational referral and almost completely lacking in the psycho-social growth and vocational knowledge of their nonhandicapped peers. Assured that a concentrated effort at correcting this inadequacy might be attempted successfully at an earlier age, say 14 to 16, the New York State Division of Vocational Rehabilitation obtained a grant from the Federal Vocational Rehabilitation Administration to conduct a research and demonstration project entitled "The Effectiveness of Early Application of Vocational Rehabilitation Services in Meeting the Needs of Handicapped Students in a Large Urban School System."

Our concern is for severely disabled students who represent poor occupational potentials and for whom a "vocational readiness program" can be provided beneficially in conjunction with the regular educational curriculum. The project is a collaborative one with the active involvement of three official and three voluntary agencies: The New York State Division of Vocational Rehabilitation, The New York City Board of Education, The New York City Department of Health, The Federation Employment and Guidance Service, The Federation of the Handicapped, and The Association for the Help of Retarded Children.

The basic premise of the project with its emphasis on early vocational services will be tested against five objectives:

1. To enhance the student's self-image and development of increased self-sufficiency

2. To overcome difficulties which may exist in peer relationships

3. To help parents' reality-perception of their children

4. To give the student knowledge of the world of work

5. To help the student develop specific work habits, vocational skills, and aptitudes.

An additional overall ultimate objective is to determine which of the project's useful experiences can be carried over and made part of the school's on-going educational curriculum.

I should like to spend a few moments on the study design and sample selection and make some preliminary observations arising from the recently completed evaluation of the study sample.

Our first two-year study group of 140 students will be replicated identically, giving us an ultimate study sample of 280 students over a four-year period. These students will be 14 to 16 years of age upon entering the program and will comprise three major disability units: the socially maladjusted (or presumed emotionally disturbed), the mentally retarded, and the severely physically handicapped. Our universe for this sample is the student in the so-called "600" schools, in the CRMD classes, and in the HC classes.

Experimental and control sections have been set up for each disability unit. The entire sample has received a comprehensive three-month appraisal about which more will be said soon.

Although I could spend considerable time in discussing a number of practical problems that arose in the organization of this project, I can only take time to discuss the matter of study sample selection -- which, I feel, is of particular interest to this audience.

The selection of a sample of 140 students for Study Group One became considerably involved, more so than had been originally anticipated. It had been hoped that a study sample of between 40-50 students for each of the three disability units could be obtained easily from each of three respective school units. However, class censuses did not yield the expected number of children meeting the age and disability criteria which had been established. It became necessary, therefore, to expand the process of case identification so that in all some 30 schools in four boroughs of New York City were involved in a case-finding effort which resulted in a review of over 400 potential student candidates. Consequently, our present study sample of 140 students is derived from 20 schools spread through Manhattan, Brooklyn, Bronx, and Queens and distributed in the following way:

		No. of Schools	No. of Students
Health Conservation	(Physically handicapped)	14	55
CRMD	(Mentally retarded)	3	35
600 Schools	(Socially maladjusted)	3	50
		20	140

The most difficult of the three groups to locate was the physically handicapped. Students in HC classes in New York City public schools, for the most part, display mild to moderate disabilities and do not fall into the category of severe disability such as the severe cerebral palsies and related neuro-muscular conditions. We were faced with the necessity of weeding out scores of students with acute ailments, such as a variety of fractures, malnutrition, under-par, undefined orthopedic disability, minimal congenital anomalies, vague diagnoses of heart disease, etc. -- conditions which in our judgment did not represent serious problems for future vocational and occupational adjustment. The mentally retarded and so-called emotionally disturbed were much more easily obtained in the special schools which have been set up for their particular disabilities.

Thus, the spread of the physically handicapped sample throughout 14 schools represents not only a problem in administration and coordination but one of client management -- involving such matters as transportation and problems of self-care, including toileting, feeding, dressing, etc.

No less complicated than the study sample selection has been the development and implementation of an evaluation or appraisal procedure.

The appraisal has been designed to cover five procedures in order to provide information which, in composite, will reveal a picture of each student's significant qualities; it also includes an attempt at prognostication by use of project-designed rating scale.

The five areas of appraisal include the following:

1. Social - Conducted by Division of Vocational Rehabilitation counselor, including interview with student, with parent, and supplemented by home visit.

2. General medical - Administered to all students through cooperative arrangement and generous assistance of the New York City Department of Health. Recommendations from the medical examiner for collateral medical speciality examinations were appropriately implemented and included such fields as orthopedic, neurology, ophthalmology, otology, and psychiatry.

3. Psychological - Battery for all students included: WISC or WAIS, selected projective tests, and wide-range achievement.

4. Psychiatric - Given routinely to the emotionally disturbed unit in the "600" schools; also available to students in the other two disability units where indicated by referral.

5. Vocational - A ten-day appraisal was spread over several weeks, concentrating on several facets: program orientation for students and parents, objective vocational tests, work-task evaluation (gross manual and fine manual dexterity), work habits, self-image concepts, occupational information, and social (peer) relationships.

In addition to the above five procedures, rating scales on each student have been completed by the examining Division of Vocational Rehabilitation counselor, psychologist, psychiatrist (for emotionally disturbed group), vocational evaluator, and the student's teacher.

The total appraisal will be repeated, hopefully by the same personnel, when the service period for the experimental group is completed in the spring of 1964.

A number of quite interesting observations have emerged from this comprehensive appraisal and perhaps we can touch very briefly upon one or two. For example, our selection of students for the mentally retarded unit was made from a universe of students in special classes designed for "Children with Retarded Mental Development." Our close examination of this unit shows them, in general, to be youngsters with significant cultural deviations, serious language deficits, symptoms of neurological damage, and severe sensory defects both in the visual and hearing areas. We must certainly question whether resultant objective measures of intelligence are truly indicative of the intellectual capacity of these youngsters. ----

In the case of the youngsters from the "600" schools, those presumably emotionally disturbed our psychiatrist's examinations have uncovered a pattern of physical behavior which is strongly symptomatic of neurological damage. At this point we can add nothing more to this observation, but it is our intention to conduct specially designed neurological examinations on this group. But certainly the possible existence of neurological factors begs the question of the relationship of such factors to the pattern of social maladjustment characteristic of these students.

It may be of additional significance that this emotionally disturbed group measures, for the most part, as below average in intelligence. Interestingly enough, the same pattern holds true for the physically handicapped group where one might have expected a somewhat higher range of intelligence to prevail. However, because the physically handicapped group includes a sizeable number of cerebral palsied youngsters, with known intellectual deficits, further delineations of diagnostic groups need to be done before any meaningful comparisons can be made.

What is important in all of these preliminary findings is the significance which they have for the professional person who must deal with the education and management of such students day after day. The teacher, the vocational counselor, the physician, the therapist, and others need accurate, complete, and up-to-date information to do an effective job -- and I must underscore that phrase up-to-date.

I should like now in a few words to describe the service phase of the project.

Following the completion of the appraisals in January 1963, a random selection of the sample created experimental and comparison (control) sections for each of the three disability units. The comparison sections then reverted to their regular school status -- to be recalled for re-appraisal in the spring of 1964.

In February the three experimental units entered into a three semester service program conducted at voluntary rehabilitation agencies:

1. The mentally retarded are served at the Association for the Help of Retarded Children Training Center.
2. The physically handicapped are served at the Federation of the Handicapped.
3. The socially maladjusted (emotionally disturbed) are served at the Federation Employment and Guidance Service.

Students attend the agency two days a week and are exposed to a broad range of vocational services designed to achieve the five objectives described earlier. Some of the activities in this program include:

1. Vocational exploration in major work areas and an assessment of work tolerance
2. Field trips to industry (accompanied by vocational and teaching personnel)
3. Paid work experience in sheltered workshop setting
4. Carry-over of prevocational training to the classroom
5. Development of desirable work habits and attitudes

6. Group vocational guidance

7. Individual counseling

8. Parent education

9. Programming for student's summer activities

10. Where indicated, use of social case work services

11. Development of self-sufficiency through training in independent travel, household chores, handling spending money, social peer relationships, etc.

Since this project is structured as a research and demonstration project, follow-up is here conceived as divided between two quite distinct processes. We distinguish between follow-up service and follow-up evaluation. Under follow-up service we assume the normal responsibilities which succeed any service program, e.g. counseling, training, placement, other collateral referrals, etc. Under follow-up evaluation we shall be concerned with an evaluation of project outcomes, and a plan for such evaluation is currently being refined.

We have undertaken a complicated task and I would not dare at this point to anticipate -- let alone predict -- its outcome. I am heartened to find, incidentally, that in other parts of the country similar, although not identical, efforts are under way -- in Oklahoma, Georgia, Michigan, and elsewhere. If this presentation has raised questions in your mind, rest assured it has also in mine, and some of these I have touched upon. Let's meet again in five years, and perhaps I can then report some answers.

Morris Klapper, Project Director, Handicapped Student Research Project, Division
of Vocational Rehabilitation, State Education
Department, Albany, New York

THE INFLUENCE OF SOCIOPATHY ON CHILDREN'S REACTIONS TO READING INSTRUCTION

Stanley Krippner

In recent years, the nature of sociopathy has been of increasing concern to American psychologists, psychiatrists, and psychoanalysts. Lindner, who painted a vivid picture of a sociopath in his popular Rebel Without a Cause (1944), has written that in the sociopath "we encounter the most destructive of all known forms of aberrant behavior" (1948). Also referred to as "psychopathic states" (Ganzhorn, 1961) and "character disorders" (Jones, 1954), sociopathic conditions are regarded by many psychotherapists as the most difficult form of mental illness to treat successfully (Bromberg, 1957; Cleckley, 1959).

At the Kent State University Child Study Center, children are often referred who exhibit sociopathic symptomology and who have not benefitted from reading instruction in the school classroom. Clinicians at the Center have found especially valuable the descriptions of sociopathy presented by such writers as Cleckley (1959), Gough (1955), and Menninger (1941). The extensive clinical experience of these writers has led them to view sociopathy as a gestalt of characteristic attitudes and behavioral patterns. This gestalt includes:

1. Anti-social behavior. The sociopath has little regard for the rights or feelings of other people. He is marked by an incapacity to love. As a result, he will disregard others in the attainment of his goals and will rarely form a deep persistent relationship with anyone. Sociopathic children seen at the Child Study Center often play off one companion against the other and rarely have close

friends of either sex. Their behavior is marked by bullying, cheating, and cruelty of both a physical and verbal nature.

2. Disregard for the truth. The sociopath is reality-orientated to a sufficient degree to know the difference between truth and falsehood but is generally not deterred by this knowledge. Usually he seems confident and at ease while making a promise he will never keep. While committing the most serious of perjuries, it is easy for him to look anyone calmly in the eye. The mother of a sociopathic child seen at the Center was asked if her son tended to prevaricate. She replied, "He lies all the time; you can never believe a word he says."

3. Inability to accept blame. Although he repeatedly brings disaster upon himself and others, the sociopath rarely accepts responsibility for his actions. He projects blame upon others whenever he feels he can do so successfully. When the facts of the matter implicate him beyond the shadow of a doubt, the sociopath often is very eloquent and convincing in his expressions of regret. His future actions, however, indicate that no true remorse has been experienced and that no lesson has been learned. Parents of sociopathic children often remark that no matter how severe the punishment, their son or daughter soon commits a similar misdemeanor.

4. Overconcern for immediate goals. The sociopath is often violently insistent upon gratifying some momentary whim. On the other hand, long-range goals are of little concern. Impulsivity, irresponsibility, and unreliability characterize his actions and he seems to use poor judgment in making plans for the future. Apparently unable to profit by experience, the sociopath seems to fail in the few constructive activities which he undertakes. One sociopathic child, seen at the Center, could never complete a project once he had undertaken it. These projects ranged from building a tree-house to working a jig saw puzzle to reading a book. He apparently lacked the psychic energy and the personal commitment to see these endeavors through to completion.

5. Absence of anxiety, guilt, or shame. Lacking deep emotionality or affect, the sociopath is not handicapped by neurotic fears, psychotic delusions, or normal concerns regarding his behavior. He generally realizes that society has set up standards of right and wrong but has no internalized code himself. There is little positive response to the kindness of others, no compunction to keep a promise, and no sense of fair play or justice. When a sociopathic child seems generous or loving, it is most likely a ploy on his part to gain some immediate goal. One girl seen at the Center told the clinician, "I like you better than I do my own mommy." It was later discovered, however, that ulterior motives were involved. The girl told the clinician, "I'll bet you that my mommy would buy me a bicycle if you asked her to." As a result of this behavior pattern, many sociopathic children grow into adults who take what they want from society, giving nothing in return, who substitute charm for work, and who feel no moral compunction to change their ways (Beacher, 1962; Thorne, 1959).

The existential writers have made many contributions in the area of personality theory which further illuminate the nature of sociopathy. Existentialists stress the necessity of committing oneself to a course of action and taking full responsibility for the outcome of this action. Some anxiety and guilt are often stimulated by the realistic perception of the impact of these actions upon others. For the relatively healthy individual, this anxiety and guilt is an inevitable condition of human existence. For many individuals, however, guilt and anxiety are outcomes of blurred perceptions of reality and are, therefore, symptoms of neurosis. The sociopath, however, fails to experience guilt or anxiety of either the "inevitable" or "neurotic" variety. Haigh (1961) sees the sociopath as attaining this freedom from guilt by refusing to commit himself to any meaningful involvement with other people.

From an existential point of view, therefore, the sociopath lacks a sense of "being." His apparent unconcern for long-range goals, his disregard for social standards, and his lack of such emotional feelings as guilt and anxiety stem from a refusal to commit himself to definite objectives, to assume responsibility for his actions, to involve himself in interpersonal relationships, and to face the problem of his own existence. The sociopath, then, is in a chronic state of "non-being."

Diagnostic Data

Sociopathic children seen during the past two years at the K. S. U. Child Study Center have manifested, to a considerable extent, all five of these characteristics. Within this period of time, over one hundred disabled readers were studied; six of them (five boys and one girl) exhibited severe sociopathic tendencies. Although few conclusions can be drawn from so small a sample, an examination of their diagnostic data reveals certain common characteristics aside from the behavioral manifestations just cited.

The sociopath generally possesses average or above average intelligence. Cleckley (1959) states that "The good reasoning abilities with which he is endowed are not disrupted or disorganized .... Nothing is demonstratable in his thinking at a theoretical level that accounts for the irrationality of his conduct." However Wechsler (1958) found that the Performance Scale IQ of adolescent sociopaths was almost always higher than their Verbal Scale IQ. The same pattern held true for the sociopathic children seen at the Child Study Center.

The lower WISC Verbal IQ might be cited as evidence of a basically disorganized neurological development which retards the individual's ability to develop the abstract concepts needed to adopt moral values. On the other hand, it can be as cogently argued that affectional deprivation among youngsters can rob them of the social communication which would develop verbal capacities and, along with them, social and ethical precepts. Finally, both positions may be correct to some degree. If so, the sociopath is doubly cursed: his aptitude for verbal learning is low, and his early deprivation prevents his utilizing even the limited ability for abstract thought which he possesses.

On the WISC, the sociopathic children seen at the Center did poorly on the digit span subtest. Not only would a short attention span and poor concentration affect this score. It is likely that the sociopath's contrariness would be a factor in causing him to reverse many of the digits, producing a loss of credit for the item.

The sociopathic children also did poorly on the WISC coding and mazes subtests. Once again, attention, concentration, and cooperation must be high for these subtests to be successfully completed. The sociopathic children often would make mistakes involving the substitution of one digit symbol for another or, in the case of the mazes, cross the printed lines even though they had been told not to.

These children did unusually well on the WISC picture completion subtest, a finding also reported by Frost (1960). On this subtest, the subject is told to name the missing part on each picture presented. In other words, the sociopathic child is able to rebel against the test situation not by reversing digits or crossing lines but by finding the missing item. In meeting this challenge, he is actually conforming to the subtest's required task and, therefore, makes a high score.

The Rorschach responses of these children demonstrate that sociopathy is not a unitary phenomenon nor an easily defined entity. More differences than similarities emerged on the Rorschach protocols; some children's responses indicated a general lack of affect while other children's responses revealed violently hostile feelings over which there was little internal control. Generally, however, the human content of the Rorschach responses was small, indicating a lack of close personal relationships and arrested social development. Frequent white space responses indicated contrariness and rebellion. On the other hand, the percentage of good form responses was high; this suggests that the sociopathic children were in close touch with reality. Their perceptions of the world were not blurred by neurotic or psychotic distortions. (This is not to say that sociopathy never coexists with other forms of mental illness; at times a sociopath is identified who demonstrates neurotic or psychotic tendencies as well.)

Other projective techniques, such as incomplete sentences and the Thematic Apperception Test, were also found to be useful in diagnosing sociopathy. Sample sentence completions given by one of the boys exhibiting sociopathic symptoms included the following:

> I think reading .... is not fun, I mean it is fun.
> Books are .... not fun, yes they are.
> I am best when .... I am not being watched.
> I wish my mother .... would believe me.
> My father .... doesn't believe that I didn't cut up the carpet.
> When I grow up .... I will take over dad's business.

Questionnaires and inventories were less successful because of the sociopath's proclivity toward test faking. However, several of these children answered negatively to the following questions on the Mental Health Analysis:

> Is it wrong to take things you need very much if you are sure you won't get caught?
> Do you think that people should be as careful of other people's things as they are of their own?
> Do you have a very good friend who will talk with you about your troubles?

Reading skills of these sociopathic youngsters were characteristically marked by reversals. Both letters and words were involved; "b" was confused with "d," "p" with "q," "saw" with "was," and "spot" with "tops." Letter and word reversals can be the result of directionality problems, poor instructional techniques, immature visual perception, etc. (Bond, 1957). In the case of sociopathic boys and girls, perhaps it is another indication of their rebelliousness and their inability to adhere to social expectation. This tendency might be conscious at times but it is most probably an unconscious manifestation of a broader behavioral pattern of hostility, stubbornness, and obstinacy. As a result, their reading rate was slow and their comprehension poor. Oral reading was typically characterized by hesitations, substitutions, and repetitions. Ambivalence toward the reading situation, if not downright rejection, reflected the attitudes of these children.

In a testing situation, the behavior of these youngsters often revealed their personality dynamics. Not only would they cheat on the tests if an answer sheet were nearby; they would try to get the better of the examiner in other ways as well. One boy whose hearing was being evaluated with the puretone audiometer, slyly turned his head into a position where he could see, in a reflecting mirror, the examiner's hand as it pressed the button controlling tone emission. Another boy was offered a piece of candy between testing sessions. Once the examiner left the room, the child filled his pockets with candy, not realizing that his movements were being watched through an observation window.

Turning the child around, so that his back faces the examiner, is standard practice in administering the Wepman Auditory Discrimination Test. One child, however, asked, "What's the matter? Are you afraid that I'll cheat?" Actually, the youngster had attempted to read the answers from an open manual during the administration of the WISC.

Another example involved a young boy who asked if he could inspect the examiner's stop watch. After permission was granted, the boy dropped the watch to the floor. He apologized profusely, yet dropped the watch again a few minutes later. Upon the third repetition of this act, the watch broke, much to the boys's apparent glee.

The preschool years of these young sociopaths revealed a pattern of instability and/or deprivation. The father was usually physically absent, having left the mother when the child was an infant, or psychologically absent, having assumed occupational responsibilities which kept him away from the home for considerable lengths of time. In addition, these children displayed patterns of extreme sibling rivalry, usually with an older brother or sister.

Lindner (1944) has emphasized the lack of parental identification in the cases of sociopaths he has worked with. Because the father does not meet the needs of the child, society becomes a father-image against whom the sociopath can rebel. The school and the teacher, we might conjecture, are frequent targets for the sociopath's wrath.

Weinberg (1952) has differentiated the sociopath from those individuals who may seem to display sociopathic symptoms but whose basic disorders are quite different. These include the "acting-out neurotic," the "self-centered indulgent personality," and the "sub-cultural deviant." These individuals may also engage in anti-social acts and indicate an inability to learn from experience; they do not, however, exhibit the entire gestalt which typifies what Weinberg calls the "true" sociopath. The children seen at the Center could not be classified as sub-cultural deviants. They came from middle class or upper class homes. There was no indication that any of them had lived in lower class neighborhoods during their preschool years or that they had suffered from a lack of material commodities. Their physiological needs had been satisfied, even if their psychological needs were unfulfilled.

These sociopathic boys and girls displayed a pattern of failure and self-defeat. All were having difficulties academically, and most of them had been punished for disciplinary infractions as well. Although guilt and shame in their usual form are not typical of the sociopath, many writers feel that sociopaths unconsciously bring about their own punishment (Bromberg, 1957). Just as there has been no father to love the child, there has been no father to discipline the child. When the sociopath lashes out against a father image in retaliation for paternal deprivation, the logical concomitant of his actions would be paternal punishment. This is why Reik (1945) feels that the sociopathic lawbreaker will eventually commit a crime so carelessly as to bring about his punishment by a father-figure such as a policeman or a judge. (Not all sociopaths are poor learners; a few do very well in school. Members of this group, however, often find themselves in some other sort of trouble whether it be social, legal, or familial.)

Sociopathy and Learning

When the young sociopath is faced with the task of learning how to read, all of his psychological inadequacies come into play. The Child Study Center's experience with sociopaths, both in school classrooms and in remedial settings, indicate several reasons why the sociopath finds reading instruction a difficult task:

1. The learning process is usually not seen as meeting immediate needs, and the sociopath is not committed to work toward long-range goals.

2. Teachers often represent authority figures and social standards. The sociopath characteristically rebels against authority and disregards societal regulations. Therefore, it would be difficult, if not impossible, for a positive teacher-pupil relationship to develop.

3. Much learning is done in group situations. The sociopath, however, seems incapable of involving himself in close personal relationships. Because he stands outside the group, he is unable to benefit from social learning, group projects, and the academic stimulation emanating from other students. In addition, he is often unpopular and a behavior problem due to his prevarication, his disregard for the rights of others, and his projection of blame upon his peers.

4. A modicum of anxiety is often regarded as a beneficial quality in the learning process as it helps to spur the ambitious student toward mastery of the task at hand. In addition, an emotional cathexis upon some subject in school will often lead to success in that area. However, the sociopath's emotional poverty and his apparent lack of anxiety handicap him in becoming motivated toward learning.

5. The sociopath's irresponsibility and impulsivity frequently result in unfinished assignments, incomplete papers, and erratic classroom behavior.

6. Academic failure is often the result of the sociopath's pattern of self-defeat, lack of personal insight, inability to learn from experience, and poor judgment in the attainment of objectives.

The more severe the sociopathy, the more difficult the task faced by the classroom teacher or remedial tutor. The Child Study Center has found that special help in reading invariably ends in failure unless there is personality change on the part of the pupil. The sociopath's gestalt of personal shortcomings is usually such a formidable block to reading instruction that family counseling and psychotherapy must be inaugurated if he is ever to master academic skills.

Summary

Various writers have described the characteristic attitudes and behavior patterns of sociopaths. These include anti-social behavior, a disregard for truth, an inability to accept blame, an overconcern for immediate goals, and the absence of anxiety, guilt, or shame.

Diagnostic evaluation of six sociopathic children at the Kent State University Child Study Center revealed typical WISC subtest patterns, a characteristic set of reading problems, deviant behavior in the testing situation, environmental instability in the preschool years, and the gestalt of symptoms mentioned above.

If psychotherapeutic measures have not ameliorated the sociopath's problems, reading instruction is likely to be frustrated by the sociopath's lack of interest in long-range goals, his resistance to authority figures, his impulsivity and irresponsibility, his general lack of motivation, and his inability to learn from experience. In addition, the sociopath finds it difficult to learn in group situations as he seems incapable of forming deep personal relationships.

From an existential viewpoint, the sociopathic boy or girl lacks involvement, commitment, and the assumption of personal responsibility when faced with a learning situation. The more severe his sociopathic tendencies, the greater the task faced by those adults who attempt to assist him.

References

Beacher, A. I. Psychoanalytic treatment of a sociopath in a group situation. American Journal of Psychotherapy, 1962, 16, 278-288.

Bond, G. L. and Tinker, M. Reading difficulties, their diagnosis and correction. New York: Appleton-Century-Crofts, 1957.

Bromberg, W. Dynamic aspects of psychopathic personalities. Psychoanalytic Quarterly, 1957, 16, 459-467.

Cleckley, H. M. Psychopathic states. In S. Arieti (Editor), American handbook of psychiatry, Volume 1. New York: Basic Books, 1959.

Frost, B. P. An application of the method of extreme deviations to the WISC. Journal of Clinical Psychology, 1960, 16, 420.

Ganzhorn, Betty. Variants of the psychopathic personality on the college scene. Personnel and Guidance Journal, 1961, 39, 497-501.

Gough, H. G. A sociological theory of psychopathy. In A. M. Rose (Editor), Mental health and mental disorder. New York: W. W. Norton, 1955.

Haigh, G. Existential guilt: neurotic and real. Review of Existential Psychology and Psychiatry, 1961, 1, 120-130.

Jones, M. Treatment of character disorders. Bulletin of the World Federation of Mental Health, 1954, 6, 66-71.

Lindner, R. M. Rebel without a cause. New York: Grune and Stratton, 1944.

Lindner, R. M. Psychopathy as a psychological problem. In P. L. Harriman (Editor), Encyclopedia of psychology. New York: Philosophical Library, 1948.

Menninger, K. Recognizing psychopathic personalities. Bulletin of the Menninger Clinic, 1941, 5, 150-156.

Reik, T. The compulsion to confess. New York: Farrar, Straus and Cudahy, 1945.

Thorne, F. G. The etiology of sociopathic reactions. American Journal of Psychotherapy, 1959, 13, 319.

Wechsler, D. The measurement and appraisal of adult intelligence (fourth edition). Baltimore: Williams and Wilkins, 1958.

Weinberg, S. K. Society and Personality Disorders. New York: Prentice Hall, 1952.

Stanley Krippner, Director, Child Study Center, Kent State University, Ohio

---

NORM VIOLATION, CLASS STATUS, AND MOBILITY: SOME IMPLICATIONS FOR SCHOOLS

William C. Kvaraceus

In his "Letter from a Region in my Mind," James Baldwin quickly brings my theme into focus. He writes that it became clear to him at a very young age that the boys "would rise no higher than their fathers ...." and that "School began to reveal itself, therefore, as a child's game that one could not win, and boys dropped out of school and went to work." However, against the advice of his father, he stayed in school, but he also states, "I no longer had any illusion about what an education could do for me." He had encountered too many college educated handymen.

What are the relationships between factors of class status, mobility, and norm violation? What implications can be drawn for schools as data become available to help us answer the prior question?

This paper reports some of the findings in two New England studies currently underway: (a) the X City Massachusetts study - reported herein and supported through the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare and (b) the Y City Massachusetts study - carried out by Gerald J. Pine in partial fulfillment of degree requirements for a doctorate; to be submitted as a dissertation entitled, "The Significance of the Relationship Between Class Status and Delinquent Behavior" at Boston University, June 1963.

Both studies have aimed to estimate (a) the distribution of norm violations among social classes, (b) the relationship between social class mobility and norm violations, and (c) to draw some implications for the school in the area of curriculum, counseling, and teacher-image.

The Design of the Studies

The X City Study was conducted on the rim of the Metropolitan Boston area and represents an extension of a three year delinquency prediction experiment (Kvaraceus, 1961a) started at the junior high school level (grades seven to nine) in 1956. During this three year period pupil behavior that ran counter to some established rule, regulation, or law in school and community was noted and recorded with the help of teachers, counselors, principals, police, and juvenile court officials. These reports were used to categorize the subjects in accordance with the type, severity, and persistence of the offenses. Four major rubrics were established as follows: 0 - those subjects for whom no offense of any kind was recorded during the three year period of the study; 1 - those subjects for whom only minor school offenses had been recorded; 2 - those subjects for whom both school and community offenses were recorded but for whom no "legal action" was taken; 3 - those subjects who were engaged in serious and persisting norm violations and on whom some legal or official action had been taken by police or court. In a sense these divisions represent a continuum ranging from "none" or "never" through "serious" and "legal offender."

Using the original seventh grade sample, graduated from high school in 1962, all norm violators together with a sample of the "lily-whites" were stratified using Warner's traditional ISC technique. The distribution for class status was dichotomized into "the uppers" and "the lowers." Approximately one-third of the sample made up the upper class and two-thirds fell into the lower class category, thus reflecting the skewness estimated from census classification data.

Table 1 represents the breakdown by sex, and category of norm violation for the sample employed in the study:

Table 1
X City sample of boys and girls

Degree of offence	Boys	Girls	Total
0 (no violations)	62	108	170
1 (minor in school)	49	30	79
2 (in school and community)	25	10	35
3 (legal offenders)	10	5	15
Total	146	153	299

Following graduation from high school, data were obtained on nine variables believed to indicate some evidence of mobility (up, down, stable). These included such factors as change of residence, school leaving, course selection, educational aspirations, occupational decisions, participation in extra class activities, scholastic rank in class, and quartile position on group measures of intelligence and reading capacity.

F ratios via analysis of variance were employed to estimate significance of differences between criterion groups and those pupils who were never reported for norm violations and class status factors. The much overworked chi square could not be worked in analyzing percentage differences on mobility dimensions because of the small numbers in certain cells. These data were inspected for trends using graphic techniques. Currently a discriminate analysis is being planned between the "never" offenders vs. the combined 1 and 2 categories with the expectation of ultimately plotting the position of the legal offenders within a multi-variant analysis design.

The Pine Study was conducted in the original Yankee City. The sample included 683 pupils in grades nine through twelve representing the general school population of adolescents selected without known delinquency histories. The sample was stratified into three social class status groups (upper-middle, lower-middle, and lower), three social mobility status groups (up, down, stable), six occupational aspiration groups, and three education aspiration groups. In obtaining stratification data, the following instruments were used: Warners ISC, a multi-factor mobility scale consisting of eight different factors, and a questionnaire entitled "Vocational and Education Data Sheet." Information regarding delinquent behavior was collected through the use of a self-reporting questionnaire coded to preserve anonymity. One hundred twenty items made up this instrument designed to obtain a measure of an individual's degree of involvement in several categories of norm violating behavior.

From the delinquency inventory 15 scores were obtained for each individual. (Delinquency variables included: number of offenses, school offenses, delinquency treatment, gross delinquency score, property damage, misdemeanors, theft, truancies, family violations, alcohol offenses, collective participation, serious offenses, physical assault offenses, motor vehicle, narcotics.) The relationships between social class, social mobility, occupational and educational aspirations, and the 15 delinquency variables were analyzed using chi square. The .05 level of probability was employed as the criterion level for significance. Relationships between social class status, social mobility status, and delinquency variables were further tested by controlling the data for grade and sex.

Major Findings

Y City Study - No significant relationships were found to exist between social class status and 12 of the 15 delinquency variables. Significant relationships were found to exist between social class status and alcohol offenses, serious offenses, and collective participation in delinquent acts. Upper-middle class students were found to be more involved in alcohol offenses and were also found to participate more in delinquent behavior as a collective activity than were students from the other two classes. Proportionately more members of the lower-middle and lower classes were involved in serious offenses than were members of the upper-middle group. Among the groups controlled by grade and sex, onerelationship was found to be significant.

No significant relationship was found to exist between social class status and delinquency treatment scores. No differences were forthcoming as to what agencies had contact with the offenders from various classes, and no preferential treatment was accorded the offenders of higher status, contrary to general impressions that are frequently maintained in some quarters.

Significant relationships were found to exist between social mobility status and 14 of the 15 delinquency variables. Students moving downward in the social structure were more involved in physical assault offenses, theft, felonies, school offenses, property damage, misdemeanors, truancies, motor vehicle offenses, and alcohol offenses. Proportionately they had higher gross delinquency scores and delinquency treatment scores; they participated in more norm violations, and their norm violations were more collective type activities than individual. Students moving upward in the social structure were least involved in the offenses cited and had lower delinquency treatment scores and lower gross delinquency scores. Students in the stable mobility position were more heavily involved in family violations than members of the other two classes. Fifty-one of the sixty relationships among the groups controlled by grade and sex were found to be statistically significant.

Significant relationships were found to exist between educational aspirations and 10 of the 15 delinquency variables. Adolescents aspiring to enter college were least or modrately involved in the delinquency offenses; adolescents definitely planning no further education after high school were more heavily involved in delinquency offenses.

Significant relationships were found to exist between occupational aspirations and four of the delinquency variables (narcotic offenses, family violations, alcohol offenses, and number of offenses).

X City Sample - Again no significant relationship was found between class status and degree of norm violation (Table 2) although a strong tendency toward significance is noted for boys. Girls living in less desirable houses appeared more vulnerable to norm violating behavior. More significant and reinforcing the Pine Study, the occupational choices made by the student appeared as an important differentiator between the groups studied. The higher the level of occupational reach, the less norm violating was the pupil. For boys the higher the scholarship as reported in teachers' grades, the less likely were they to exhibit norm violating behavior; for girls those falling in the lower quartile on group measures of ability tended more often to show norm violating behavior.

Table 2

Significance of Differences (F Ratio) between X City groups: never norm violating (M 62, F 108); minor norm violations in school only (M 49, F 30); more serious norm violations in school and community (M 25, F 10); legal norm violations (M 10, F 5)

Variables	Boys	Girls
Warner's SC Index	2.388	1.521
Dwelling Area (1956)	.839	1.544
Dwelling Area (1962)	.213	1.195
House Type	1.152	4.270**
Parental Occupation	1.564	1.993
Pupil's Occupational Choice	4.125**	4.103**
Income Source	.648	.489
Scholarship Rank in Class	2.877*	.645
IQ CMM	2.450	3.498*

---

* significant at 5 per cent level
** significant at 1 per cent level

The data on mobility (up, down, stable) are less clear and definitive in the X City sample. Judging from trends, the following tentative observations can be made:

1. Dropping out of school is more frequent with the norm violating groups and tends to be associated more heavily with the downward movement of the uppers.

2. Changes in residence area, up or down, showed little measured effect on the degree of norm violation.

3. More movement and ferment were visible on occupational choice than on any other criterion. Heavy movement was visible in both directions for all norm violators but the strongest trend was downward for the more serious offenders.

4. Upper class youngsters who elect non college courses and who risk their status position tend to appear with higher frequency in norm violating groups; conversely high school seniors who actually entered college programs from either class (stable upper and upward moving lower) tended to be less frequently and less seriously norm violating.

5. Participation in extra class activities for both lower and upper class pupils resulted in little differentiation among norm violators.

6. Lowest quartile performance in reading of upper class pupils appeared to be more strongly tied in with degree of norm violation than did similar placement on group measures of mental ability.

Some Implications for Schools

Both studies tend to support the major conclusion that norm violating behavior is less a function of the pupil's class status at the given moment and more a function of his class aspiration, vacillation, and dislocation. In prevention and rehabilitation of minor or serious norm violators it may not be as important to note what class the pupil is in as it is to know if he is securely located in the class, if he has just managed a toe-hold in the class, or if he is slipping down the rungs of the social status ladder. The data tend to say that schools should concern themselves with aspirations of youngsters, with the curriculum choices they make that have future educational and vocational implication, and that they should try to hold on to the pupil as long as possible. More specifically the implications for the school agency will be explored in the area of teacher-image, curriculum, and counseling not so much in an effort to prescribe an action program for any school but rather to stimulate discussion within the conference group.

Teacher-Image - Most drop-outs and delinquents have been shown in many studies to be standing in bad school posture. Frequently the nature of the school experience of many norm violators tends to push to ego-destruction. The most direct and effective way to strengthen the classroom as an ego-supporting institution is to improve the interpersonal relationships between teacher and students (Kvaraceus, 1962). Many teachers who consciously or unconsciously fear, dislike, or resent their pupils, who are uncertain of their exact role within the bureaucracy of the large city school system, who cannot resolve the daily conflict arising from their competing school organization roles and their teacher-helper roles, and who exhibit job dissatisfaction and low self-concept are, themselves, in the need of help and in no position to inspire and encourage young learners. Only as teachers become authentic and comfortable can they play out their potential hero role-model. Teacher education institutions and school administrators in charge of inservice training of teachers need to develop more nondidactic experiences aimed at self-understanding through sensitivity training, group therapy, and counseling. Hate and hostility on the part of reluctant and recalcitrant learners which are met by hate and hostility on the part of scared and pedestrian teachers provide a good working base for more severe problems (Hansen, 1963; Kvaraceus, 1961b). For children are not mischievous, malingering, malcontent, or malicious without a good network of reasons. The basic need in the schools today centers around the improvement of the quality of the teaching personality. But who wants to be like the teacher?

Curriculum - In an earlier report prepared on behalf of the Secretariat of UNESCO for the United Nations Consultative Group on the Prevention of Crime and the Treatment of Offenders, I pointed out that the major purpose and function of the school is to develop new and improved behavior and to modify or change old and undesirable ways of behaving for the betterment of self and society (Kvaraceus, 1961b). In this sense, learning as a product must be viewed in terms of specific and desired behavioral changes or acquisitions of new and improved modes of adjustment in consequence of school attendance. For this purpose, the school plans a curriculum and provides a special environment.

In addition to the time honored function of transmitting the heritage and of developing the rational powers, the modern school, if it is to improve the adaptations of youths, must view itself as an agency for cultural renewal and change. As the several reports of the recent International Conferences on Public Education and the various sessions of the International Advisory Committee on School Curriculum have noted, the objectives of character development, worthy use of leisure time, vocational training, worthy family membership, and civic and social competency must be placed in proper perspective and balance as the public and the schools raise the questions "What are we educating for?" and as they re-examine their objectives against the needs of all pupils and the needs of urbanized and technological society. Schools and society can no longer avoid assuming a definite value stance and posture in the education of youth. If schools can modify the behaviors of large masses of children, thereby changing the culture (way of life), they may ultimately live up to their potential as agents for cultural renewal and change. Otherwise the schools, looking always backward, must face the imminent danger of becoming the most expensive irrelevancy of the twentieth century.

The formal curriculum provides planned and systematic experiences through which certain expected behavioral changes will take place. This is the visible curriculum of the school. For most delinquents, as well as for many nondelinquents, this curriculum operates in a monotonous routine and ritual of lesson assigning, lesson hearing, and lesson marking. The stagnant courses of study in many schools need to be revitalized and contemporized to avoid the trilogy of boredom, failure, and shame found so frequently in the school case histories of young offenders.

In view of the wide range of individual capacities, interests, and talents found in the student population, school personnel need to promote a more comprehensive and varied school offering that provides more adequately for the differential needs of the learners and of the society. This point has been emphasized by both the International Conference on Public Education, the International Advisory Committee to UNESCO on the School Curriculum, and the several Conant Reports. Unless the curriculum is made more meaningful and enables some degree of success, many pupils will turn in an outward-bound direction. Truancy and early school leaving have been shown to be closely associated with juvenile delinquency.

Recognizing the fact that in complex societies, a large proportion of delinquency stems from the pressures, frustrations, and deprivations of various milieux, the special problems that arise from a prestigious and traditionally academic curriculum need to be faced. Attention must be directed to helping all students -- no matter their status or station in life -- to find a meaningful and rewarding experience in the school, thus minimizing the dangers of failure, friction, and frustration. This need to focus on a meaningful life-oriented curriculum is imperative at all school levels in order that the school may provide reasonable and realistic goals for all pupils. An improved curriculum, in addition to traditional offerings, should center around the communication skills, leisure time pursuits, family-life relationships, child-rearing practices and skills, and beginning job competencies. Unless the curriculum of the school is broadened, for many youngsters the school will only serve as a sharp point of aggravation. The dismal school case histories of most delinquents indicate much discomfort, failure, and frustration that root in the inadequacies of a one-track curriculum.

The strong and steady efforts that are being made on all sides to improve and extend education at the secondary and college levels must be matched by similar effort to improve and extend the base at the elementary school level. If the public school hopes to overcome the problems of motivation, retardation, and aspiration of the larger number of big-city youngsters who come from urban housing estates and decaying apartments of the inner city, they will need to extend the public school program downward to include the three to six-year-olds.

An experimental project now in its second year at Boston University under the direction of Blatt (1962) strongly supports the hypothesis that preschool familial mentally and culturally retarded children from the most deprived environments will respond to a particular type of learning situation in a way which will not only be viewed by them with feelings of success but will reinforce the motivation to increase further their academic skill and knowledge. As a result, when they begin the regular grades they will not experience an interfering discrepancy between the school and family cultures and will be in positions to compete more successfully in academic and related activities.

In a rapidly changing socio-economic-political scene, the school must remain experimental, flexible, and fluid. The hard institutionalization and standarization of school curriculum and procedures can mean that fewer and fewer youth will be well served; it will also mean the earlier emission of the young into an urban technological society that is not ready to absorb them. Social inadaptation can be closely tied to the selectivity and inflexibility of a one track curriculum.

But there is also a second curriculum which is to be found in the culture of the school, (Kvaraceus, 1958). This is the way of life of the school that sets the normative pattern of how to act and how not to act. The culture and subcultures vary from school to school. A student may gain status and prestige with his peers in one school by being a good scholar-student, in another by playing a truant role, and still in another by being a good athlete. This subliminal curriculum, like the hidden and major portion of the iceberg, is a natural extension of the visible and formal curriculum of the school. Though hidden, it may represent for social adaptation and inadaptation the more formidable and even more effective aspect of the learning process.

Social adaptations and social inadaptations can be reinforced or weakened according to the value systems dominant in the school society. Efforts of school personnel should be focused on the nature of these cultural determinants of behavior and the direction these forces take. Such dimensions of the school milieux as the following should be examined for their behavioral determination: the sex-crossed activities of the coeducational school; the monosex activities of the segregated school; the futuristic nature of the school's objectives; the delayed and postponed responsibilities of school youth; the hero models among school staff and student body; the controls of clock and calendar on the learning process; the homogeneity of age-grade groupings; the nature and extent of the external controls and authority; the compulsory nature of school attendance and learning; and the activity-passivity levels of the pupils in the administration and conduct of the school program. Factors such as these combine to make up the peculiar society of the school. While they vary from school to school, they never fail to have a pervasive influence on the behavior of all those who live and work within the school.

Counseling - Recently the U. S. Office of Education announced fifty-three short term counseling and guidance training institutes for the summer of 1963 and twenty-three regular full term institutes for the academic year 1963-64. This means that 1,600 counselors will obtain additional training and 700 teachers preparing to be counselors will be enrolled this year under the National Defense Education act to improve the qualifications of secondary personnel engaged in counseling and guidance. How can these specialized personnel and others like them who come from training programs unsupported by the government or who are already on the job best assist the pupil in the big city school systems? (Kvaraceus, 1957; 1960).

The student personnel worker is a constant reminder of the inadequacies and malfunctioning of an overcrowded and inefficient school agency. He represents a community gesture to repair the wear and tear of an inadequate curriculum, of bigness and impersonality, of poorly trained and listless teachers, and of the cultural discrepancies between home and school. However it is not enough to keep providing more and better personnel services in a valiant and expensive effort to prop up the classroom; it becomes imperative to shift the focus of the personnel services and to attack the basic causes that result in a demand for these services in the first place. The chief goal of school and student personnel services should not be more and better services; it should be the elimination or solution of the school-community problems that create the need for such services.

Personnel workers should start by being more selective and discriminating in the cases they undertake to serve. They will also need to call a halt to the number of youngsters that are added to their mounting case loads in their intent to please and serve. This will demand a clear understanding of their own competencies for dealing with certain types of cases and a more realistic time concept of the rehabilitation process. Talking with a disturbed youngster two or three times a month may mean that he has been seen but not necessarily served. Indiscriminate case referrals and heavy case loads involving several hundred clients water down the effectiveness of most personnel workers today.

Of particular concern to the counselor, as indicated by our research data, should be the youngsters who are in transition without overlooking those who are on the downward move. Preoccupation with the problems of the upwardly mobile may cut out needed service for the middle class student who can just about finish out the high school program but who cannot find an entrée to any college.

We have always pointed out that many of the problems of the nonlearner and the norm violator take root in the curriculum. In trying to assist these youngsters many counselors, case workers, and psychologists suffer severe job frustrations. Lacking a comprehensive and balanced curriculum, the best they can hope to accomplish is to persuade the disinterested and failing pupil to return and to adjust to what is basically an unsatisfactory and unpromising learning situation. So long as the school lacks a varied curriculum to meet the needs of all youngsters the effectiveness of the counseling, social work, psychological, and attendance services will be severely circumscribed. A major and primary prerequisite to effective school and pupil personnel services is a balanced and varied curriculum that accommodates all levels of talent, that meets a wide range of interests, and that prepares for the job requirements of the current labor market. School and pupil personnel workers can best serve their present and future clients by addressing themselves to the improvement of the curriculum of the school. Exclusive preoccupation with the one-to-one counseling process only represents a stop-gap measure.

Personnel workers must be alert to exploit the unusual differences and the bizarre interests of city youth rather than prune them back to conform to classroom ritual and routine. Most guidance workers have fallen into the soft trap of uniformity and conformity as an ideal toward which all students are to be trained. There is little space for digression in the secondary schools today.

One shudders to consider what the school counselor might have done with young Ben Franklin in the modern high school. Ben's esoteric experiments would not have endeared him to his instructors or counselors. If he could have survived the standardized manual of laboratory experiments, it is more than likely that his advisor, armed with the results of the Kuder Preference Record and the Otis S. A. IQ, might have pointed him to a career of science teaching in some North Philadelphia junior high school.

All school and student personnel workers need to orient their services to teachers as well as to individual pupils. According to recent studies there are more than 11,000 fulltime counselors in the nation's high schools, but there are also about 9 million high school students. The implication is that individual pupil counseling will have little impact on the incidence of failure, school leaving, and social-emotional problems of city school youth, judging from the number of cases that can be handled in office-oriented counseling situations by the number of available personnel.

Guidance workers and others must spread their influence to more pupils by working through the teaching staff. This can only be accomplished if a mutual relationship of trust and respect exists between teachers and personnel workers. Many social workers, psychologists, and guidance workers could make their influence felt on a school-wide basis by conducting group therapy sessions for staff and by creating opportunities for individual counseling of staff members. Barriers to this broadcast role exist both in the concept the teacher may have of the counselor as well as in the counselor's self-concept of his own professional role. The more difficult and complicated block is perhaps in the counselor's self-concept, in his own lack of confidence in this wider potential role, and in his own somewhat unprofessional concept of the guidance function. Whatever the role that is attributed to him by others, the counselor is the one who gets the ceiling as to the limits of what status can be attained through his self-concept. Too often this ceiling is too low in the big city schools.

Summary

Writing in the introduction to August Aichorn's much reprinted Wayward Youth, Freud referred to the "three impossible professions." "In my youth," he stated, "I accepted it as a byword that the three impossible professions are teaching, healing and governing...." At no time in American history has teaching appeared more impossible than now in the decaying or newly rebuilt neighborhoods of the big cities. The American ideal -- perhaps even the American complex -- of a compulsory classroom containing everyman's child and somehow promising educational growth for all is now being tested out as fantasy or reality. There is much that we can do to make it a reality.

References

Blatt, B. Effects of responsive environments on the intellectual and social competence of educable mentally retarded children: theoretical consideration. Paper presented at American Educational Research Association Meeting, Atlantic City, February 21, 1962.

Hansen, C. F. Interview in U. S. News and World Report, March 11, 1963, 62-68.

Kvaraceus, W. C. The counselor's role in combating juvenile delinquency. The Personnel and Guidance Journal, October 1957, 99-103.

Kvaraceus, W. C. The behavioral deviate in the culture of the secondary school. In Frontiers of secondary education, III. Syracuse: Syracuse University Press, 1958. Pp. 18-28.

Kvaraceus, W. C. The status and function of personnel services. Education, December 1960, 202-209.

Kvaraceus, W. C. Forecasting delinquency: a three-year experiment. Exceptional Children, 1961, 27, 429-435. (a)

Kvaraceus, W. C. The role of the school in the prevention and control of juvenile delinquency. Paper prepared by the Secretariat, UNESCO, October 23, 1961. (b)

Kvaraceus, W. C. Helping the socially inadapted pupil in the large city schools. Exceptional Children, 1962, 28, 399-404.

William C. Kvaraceus, Professor of Education
and Director of Youth Studies, Tufts University,
Medford, Massachusetts

CLINIC: THE EMOTIONALLY AND SOCIALLY MALADJUSTED CHILD

Consultants: William C. Kvaraceus
Ralph D. Rabinovitch

(The entire session was devoted to answering questions from the audience. Excerpts which appear were prepared from a tape recording of the session.)

Question: In a class of educationally mentally retarded children, there have been placed two emotionally disturbed children. How should I handle these children?

Rabinovitch: Well, I would think you should handle them very nicely and benignly and insightfully. Actually though, the question does raise an interesting problem, the whole issue of retardation as a diagnosis versus retardation as a symptom. Of course, we know there isn't any teacher with a class of retarded children who is not aware of the wide variety of clinical problems the children present. I don't know what percentage of children in our state schools for the retarded are autistic schizophrenic children who are functioning at a retarded level. I would say, however, that more and more we are recognizing lowered academic achievement or intellectual functioning to be a symptom reflecting a wide variety of clinical problems. Now, whether they should all be handled together or whether we should be more careful in terms of our selection and placement of children is a question. My own feeling is that by and large children tend to do better in a group appropriate for their own level of functioning regardless of the etiology of their disturbance. If a child is actually functioning at a retarded level socially and intellectually, regardless of cause, he usually does better in a program for the retarded. There is an interesting sidelight to this: I've had the problem of recommending commitment of a good many children to our state schools for the retarded, functioning at IQs of say 65 and socially having great troubles and needing institutional care. And I've received very nasty letters two years later from certain people saying, "This child now has an IQ of 92, and you had no right commiting him here; this was illegal." I always write back and say, "Congratulations, I obviously placed him in the right setting because he's done so well, and I'm delighted to take him back now." This has happened to a number of our retarded children. Of course there are certain groups of children functioning at a retarded level who require a specialized type of program, for example the relatively inaccessible autistic group or the brain-injured children who are potentially of high level intelligence but can't function because of impulse disorders. There's such a wide range that generalizations are difficult.

Kvaraceus: I think it will probably become apparent that I don't have an answer to this question either. I might react and say that there's nothing I can disagree with in terms of what Dr. Rabinovitch said; maybe we can find points of disagreement later. However, I do think that the person who asked this question must have been a teacher; so my feeling would be that she should act like a teacher, not like a therapist, whatever that is. I have a feeling that this teacher should look upon this student as a youngster with a learning problem, be concerned more with cognition and less with affect. After all there is a question of how much therapy some of these kids can stand. I think she ought to be concerned with the healthy part of the youngster, whatever that is -- not so much focusing where he is sick but where he might be functioning. And I think the teacher might be more concerned with the present and look to the future rather than look backwards, thus getting stuck in the present because of a long backward look. In a sense I'm saying that the teacher should look upon this youngster as a learner and act like a teacher.

Question: What do you consider better -- a structured or a permissive program in the education of emotionally disturbed children?

Kvaraceus: There is a certain kind of reality that's very reassuring for adults and youngsters. I think there's a reality of the real question in front of you when you really may not know what the question is.

I'm answering this somewhat in terms of a current program going on at a hospital with which I happen to be connected in the Boston area in which we are trying to get at the role and function of the teacher. We are trying to see what is related to learning, in terms of the youngster's growth when the teacher has very definite tasks to do. She herself knows what she's doing. The youngster knows what he's asked to do, he has a task, he meets it. In a sense I would say that the youngster who comes in, in terms of this institution school as a very disturbed youngster with high ability for learning is, I think, responding to a known reality of what's expected of him. He must be reminded that this is a school. It's a different place from the hall or a ward; you don't use this kind of "fancy" language because this is a school. And you do wear your shoes because this is a school. We keep reminding him that this is his reality, this is a school, it has rules, it has regulations. We must keep saying it all the time, and we ought not to get sore when the youngster doesn't respond on the first suggestion or first request. I have a feeling about tardiness. It is that there ought to be some consequences. We have some rules in terms of a youngster who must get up at a certain hour and get down to this school off the ward. We have everybody helping him get up and if doesn't come down, if he wanders off, if he has no aid and he slips away, there are some penalties that ought to be visible to him. I'm describing, I believe, a program in which there is direction and structure, and the teacher is playing the role not of a therapist -- she's playing the role of a teacher.

Rabinovitch: I'll tell you just as a postscript to what's been said a little of our own experience. Both at Ann Arbor and then at Hawthorn, there has been an increasing structure in our special education program. ---- Over the 15 years we've been operating we have, I think, moved increasingly toward structure. A benign kind of structure I suppose you can call it with a good deal of permissiveness within the program itself but with the guidelines very definitely drawn. One of the things that has interested me recently out of our experience at Hawthorn has been the need to do a good educational diagnosis on disturbed children in addition to a psychiatric one. You may have a schizophrenic child who is clearly psychotic psychiatrically but who is gifted academically, and he will do well with an enriched kind of academic program, or the opposite may be true. Many of our earlier children have come back to us on visits, critical that we had not really prepared them to go back into the mainstream of public schools because we were too undemanding. Now we have study halls every evening for our high school and our junior high school kids. We give them regular homework. We're very careful about the themes they write because we know that for many of them the goal of our special education is return to regular classrooms. Relatively unpressuring and permissive at the beginning, one moves more and more toward structure and reasonable demand, and this has been our experience. There was a time when chaos was equated with therapy, when the more chairs thrown and the more total the confusion the better. We have got away from this view and practice now, thank heavens, and we are impressed with how well many of our sick patients can learn and how pleased they are to progress when we provide them the opportunity.

Question: Describe the etiology and nature of childhood autism and some of the latest research. What is the prognosis?

Rabinovitch: First of all, autism is in itself a symptom and not a disease. Autism simply means self-absorption or inability to communicate and is seen in a wide variety of clinical syndromes, as you know. It's common in childhood schizophrenia; it's seen in certain retarded children; it is seen in various severely neglected deprived children, and so on down the line, certainly sometimes in deaf children. If by childhood autism you mean childhood schizophrenia, which I presume you do, and Leo Kanner you recall used the term infantile autism to describe preschool five year old schizophrenic children, but this was a specific type of autism that he later equated, as we all have done, with schizophrenia. As far as the etiology of childhood schizophrenia goes, the answer is we do not know. I would say that the majority of us involved in research in schizophrenia suspect some kind of organic, some kind of neurologic deficit, perhaps of a biochemical nature, as yet undefined. We do not feel, however, that there is any reasonable evidence to suggest that childhood schizophrenia is basically a psychogenetic disease. There was a time when people talked about it being due to a refrigerator mother, you'll recall, but we've seen far too many schizophrenic children with warm, giving, and comfortable mothers and we cannot see cause-effect relationship there. In fact the mothering experience of our schizophrenic children is highly variable we have found, so let's just say we suspect a biochemical or integration defect on a neurologic level as yet undefined. There are others, I'm sure, who would be more inclined to stress the psychogenetic etiology. All I can say is that they're probably wrong. As far as prognosis goes, just a word: childhood schizophrenia is not a progressive disease. It was once thought to be a dementia which led to progressive withdrawal and ultimate total dementia. This is not true fortunately. In fact there are a good many of our schizophrenic children who improve as the years go on. We have no cure. We have only ways of helping schizophrenic children live more comfortably with their illness, adapt to it. And sometimes some of them look as though it isn't an illness, more an unusual personality type, and I think many of them can be helped to live fairly comfortably with their difference. As you probably know, the two major prognostic signs in the early schizophrenic children are the level of speech -- the degree to which speech is used in communication -- and the degree to which toys are used symbolically or as objects. If a schizophrenic child, aged four let's say, has developed no language at all, no verbal communication, and if he still uses the truck simply to turn the wheel -- you might say for sensory satisfaction rather than in symbolic play -- those are the two probably most dire signs, and we have not been successful in working with these children. Where speech develops, however, and there is some capacity to use materials appropriately, the prognosis is often much better. Special education for many verbal schizophrenic children, the opportunity to be in a special group and to have some satifaction in group relations and academic achievement, has been, I think, extremely important in terms of ultimate prognosis. I would be willing to say that my own years of experience have led me to be more optimistic rather than less so about many of these schizophrenic children when they and their families are well handled.

Question: What should be required as training for teachers who expect to work with the emotionally disturbed child?

Kvaraceus: Being in teacher training, this is a well pointed question for me. I have three thoughts about training areas. I have a very strong conviction involving three circles. One, the core being the teacher herself -- and I'm not getting seduced by the obvious fact that the teacher herself ought not to be emotionally disturbed or that she ought to be well insulated against emotional breakdown. I think she's rather human. But we ought to find teachers and develop some insights in terms of self to the level that the teacher plays an authentic role. By an authentic role, I mean that the teacher just doesn't pretend she "likes" the verse that she wants someboyd else to read but has not read a book of verse herself since the last course she had in the lyric poets at some wellknown university, under duress. At the same time the teacher herself presents a good hero-image to the youngster.

In interviewing teachers of youngsters who are emotionally disturbed, one of them used a very good phrase. She said, "Some of my youngsters are student scientists." These are emotionally disturbed adolescents. I had a feeling that surely if they are acting like student scientists, it's partly because they see an authentic image of a teacher scientist; somebody really wanted to be like this teacher. I would hope that the teacher really wants to be a teacher and that she is interested, almost eager, to work with difficult, disturbed, destructive, delinquent, dull children. Since we won't find this paragon of teaching virtue around, I think we're going to have to have some techniques to help out this teacher. I would suggest that one of the gimmicks might be the administrator, the principal, who would have such a good relationship with his teacher that he might even relieve her at a moment of crisis and take the class over while she rests some place in the teacher's room or has a chance to lie down; or better still, that he performs a certain counseling function of listening; the teacher has such a good relationship that on the way out she'll drop in the principal's office and spill it all out, and the principal doesn't mind. And the teacher's now willing to come back on Monday to go another round again. Now, this is a teacher who is willing to try it again. She's not now so mad at these kids because they are really resisting her to some extent. Yet they refuse to learn and she's really bent herself backwards trying to do all the things she has read about and everything she's heard at this convention. She's trying and nothing works and she's still willing to try. She's not sore at them yet, and she's not blaming them She's probably blaming their parents. Well, this teacher's so clear, she has such a good hold on herself, she doesn't want any of that salacious early history; she'd rather not hear too much about it; and when she does hear about it she's in fairly good control of her own fantasies and doesn't fret too much about neutralizing material. She isn't worrying whether or not to teach that delicate story of Guinevere and Lancelot to the youngster whose mother confronted the father because he had a mistress. This was a very traumatic experience to this youngster, and now the teacher knows about it. She thinks, "Perhaps I'd better clean up the literary stuff." And I wonder whether or not it might be easier on the youngster to say, "Here's this Guinevere and Lancelot in an age-old story, and this didn't happen just to you and your family." It goes on. This is a reality, and it's not as bad as that, you know. Although it's a little more romantic in the cinema than the youngster's life.

We need a teacher who's a person, a real authentic person, and to some extent has a fairly clean bill of health, and if she gets a little fouled up, we have somebody to help her around the plant so she'll continue. Now, this is the one area where teacher training institutions do very little.

We have tried a bit of sensitivity training in an experiment in which we invested our own money to the tune of $500. (This was a lure as a pilot study for greater funds to come later, we had hoped.) We had a person on our staff, with an observer present, work with people in education as they interacted with each other and learned about themselves from others, feeling that now they know a little bit more about their own motivation and how they looked to others. One of the real problems here is that half the students may decide to quit, and we may lose half our enrollment. Well, maybe better at this level than some other. Maybe they can shunt themselves off into some other field in which they'll be much more comfortable. I think we need to experiment much more in the area of the teacher as a person. Not only as an authentic person but also as a mature person.

I think there's this tremendous necessity to succeed that bothers all of us. I don't think the teachers are taught to be ready for failures. Teachers probably are a little more ready for them than the administrators. The administrators are never ready for failure for if you look at the reports in the annuals, they always tell you how many parents have been seen, how many tests have been given, but never whether or not it did any good. But these things are going on, and we never admit to any kind of failure. Consequently, somebody on the eastern seaboard discovers a boy named Johnny who can't read, and this is a big revelation. Well, we're caught with our sails down. I think we ought to face our reality. What is our true success rate? This is a hard life. How successful can we be? How much are we posturing success, and are we preparing teachers realistically for a certain amount of failure and for small growth increments? ---- Well, this is the teacher as a person. I think self-study must be an ongoing process. There ought to be available a kind of credit course for self-study with the help of other fellow students perhaps and with trained leadership. This I see lacking.

Now there's a second circle: there's much more agreement here -- that we would have a kind of methods course built around a practicum. And I might refer you to the Mackie-Kvaraceus-Williams study on teachers of children who are emotionally disturbed and socially maladjusted -- that is of teachers of children who are. The study was done nationally on the basis of a good group of experts and special teachers, presumably. They said what we need is a practical course, a seminar. I would look for two seminars in a teacher training program -- one centered about what is happening in the classroom, including both observation and participation. This seminar would be run by an educator with a pedagogic concern. The second would be run by a Dr. Rabinovitch with his kind of concern. These would be sister seminars, and that's the amount of professionalization I would look for. ----

There is a third circle that we'd all agree with. You must know something, so there is this big wide substantive area meaning you are a teacher of something. On this, we'll take our hat off to our critics and say, "Yes, maybe we need to be much more informed substantively." --------

Well, to recap, I have a major concern for the inner core circle of what we can do to help the teacher as a person. I know many ways to get youngsters out of the teacher training program by flunking them out in the other two circles. I don't know any neat way of doing it within this inner core except to say, "You don't measure up; you don't seem to have enough frustration tolerance, my student, and you're not going to make it." They may answer, "Show me the measure of my personality failure." As one of the youngsters said to me, "You've got two years to work on me." So you can't get rid of this youngster presumably because you think this; after all maybe its your own fantasy.

Question: Once the teachers have been adequately trained, they're going to go out into the field looking for jobs and they might apply to Hawthorn Center or to some institute that Dr. Rabinovitch is connected with, and I'd like to ask what methods you use for screening applicants for teaching positions -- particularly in terms of the teacher's own dynamics and how this, you would expect, would affect the children in his or her classroom?

Rabinovitch: Well I wish I knew. I have a terrible prejudice against women with huge hats; that's the first thing. There are a few other equally objective indices that I find helpful and use in my interview techniques, but those are secret and I won't tell them to you. It's a very difficult question. First of all, we want our teachers to be well trained. In Michigan we expect them all to have certification for teaching emotionally disturbed children which means that they have had in addition to selected course work a field experience, usually in a hospital or in-patient setting beyond and in addition to the usual student teaching experience. As far as their personality goes and their dynamics -- well, let me say this. As a psychiatrist, a clinician, I suppose I have respect for people's inner life, and I'm not sure that it's the job of the employer to probe much into it, beyond work-related aspects. Obviously there is a wide range of personality that can work with disturbed children. Children are exposed to a wide variety of personalities in their teachers, as you know, and this is as it should be. It's in a sense growth experience for them. If, however, the personality factors are such that they preclude insightful handling, then, of course, the teacher is not suited to work in the field. What we look for first of all, I think, is a great deal of warmth. We want our workers to be interested in children and capable of giving, a simple old truth but still valid, and we prefer that they be limitedly introspective. If our teachers become overly professionalized, you might say, to the point where they have to be sure of every move they're making and be like parents who become overly introspective in their roles, they lose their spontaneity and effectiveness. Another thing -- we want them to be able to really accept disturbed children as they come, with no illusions. ---- They also have to identify with children but not over-identify with them, and this is a tough problem. We all over-identify at the beginning, but if after a few years they're still grossly over-identifying, then troubles ensue.

Another thing, in our type of multi-discipline hospital setting they simply have to be able to work with colleagues of many other disciplines. They have to be able to identify with the total project beyond their own discipline. If we have a social worker, for example, who is desperately conscious of her social work role with capital letters and very wary that no one step on the social work toes in the institution, chances are she's not going to do well with us. If on the other hand she can be flexible enough to see herself as part of a large scheme in a multi-discipline setting, she'll do a great deal better. So we like our people to be able to lose themselves in the total effort.

I have been very much impressed with the differences in demands on teachers in a multi-discipline setting such as ours and in settings in the public schools. In Michigan, as some of you know, we've been fostering special education classes for disturbed children in the public schools, and we've had sort of a rude awakening because the teachers are terribly on their own there. They don't have the kind of total support that we can give them in a hospital like Hawthorn. They're often very much alone. Sometimes they don't have the kind of administrative understanding, either, of their problems. At Hawthorn we have many inter-disciplinary meetings where the psychiatrists and psychologists sit down with the teachers and we're all available. They just call and say, "Look, this kid's having an awful time today. What's going on in therapy?" and there's a lot of feed-back and communication. There's never enough. Everybody wants, I think, 24 hour interdisciplinary communication, but I think 22½ hours is enough. Actually, though, in the public schools this is rarely available. Some of our best teachers who have been superb in the hospital setting and who move out into a public school where they really have no support at all, where they're alone and there's no one to talk to, find life very difficult. So it's just possible that you may need different type people to do these two type jobs, and even more likely that we have to build in more supports for our special education teachers of the disturbed in the public schools too.

Finally (at last) I think it is so important that the teacher be comfortable in her job situation and appreciate the value of giving children a decent comfortable relationship experience and whatever academic training they can absorb -- this is enough. This is a very, very important contribution to their total lives. They may be able to recover or they may not be, but I think it is awfully important that the special education teacher and all of us working in the field set our goals reasonably and be able to work within the limits of the children we treat.

Kvaraceus: I've been doing a little research here, and all the questions so far have been on the emotionally disturbed. Nobody seems to be worrying about the healthy delinquent, and maybe this is just as well, but this may also be reflecting somewhat our pathology within the group. I like very much this business that we'll be very inter-disciplinary and communicating across the wide gulf.

The teachers that I'm working with have a nice phrase. We have a school within the therapeutic milieu of a hospital institution and the teachers say, "Our school is an inside-outside school." I like that because it means that we are on the campus but not altogether a part of it, that we are a separate place. In other words the youngster goes out, and he goes into a new building, and he knows he's in a school. Its almost as though he were going off campus but not that far off because he's sick, and he's still on campus but not off campus, if you know what I mean. In building a new structure the authorities were going to place the school in the new community center. From theory we would say, "No, it ought not to be because the kids won't know if they're going to recreation or to the coffee shop or to an occupation therapy class or to school. I fear there may be too much intermingling." It seems to me if you have a school in an institution you have something that's different from these other services.

Now I have a conviction that the teachers keep asking the psychiatrists questions, the answers of which the psychiatrists don't know and don't have. I keep witnessing all kinds of specific questions as we have been getting them: "What do you do when .... ?" Now, the psychiatrist doesn't have the recipe or the answer. I have a feeling that the nature of the questions that are handed out -- I'm thinking of the research back home though this may not be an analogue here -- shows that to some extent or other we've been seduced by the psychiatrists. The teacher feels herself low man on the totem pole. Yet when I evaluate the two teacher-training seminars I find they just love to come to the Wednesday seminar and they dislike the Tuesday seminar. Wednesday is the psychiatrist-led seminar, and it has all kinds of salacious tidbits in it. This is my projection -- perhaps.

It gets to be hard work Tuesday when we say, "Now, what are your specific objectives?" And the teachers say, "Oh, this kid can only recall; he cannot generalize." And we say, "Now, what activities did you give him that enabled him to generalize so you have certain objectives, and what activities did you engage the child in in order to get at this particular objective?" A very dirty question to ask. I know the question is dirty because it says, "What's your specific goal?" and secondly we ask, "How did you plan to get to that particular goal?" Now these are very difficult questions, and I don't know that the pedagogue knows the answer either.

The kind of interaction that we need within each seminar and between seminars represents a kind of mutual aid in which the teacher views herself with some self-respect and justification. She's not just a hand maiden to any old therapist around the place; she's something in her own right. To some extent the educators have the answer to the psychiatrist-administrator's dream. You keep these kids occupied in school all day long. And if he's very sick and can't get off the hall or ward, then they have a lot of trouble with him. You need an aid and a nurse around. Here you are, you've been managing six of them in one class, and it's a wonderful thing to have a school because you have these patients busy. I don't like the connotation of busy work, but let's say gainfully occupied toward reasonable objectives under benign mothers of a type. Now when you mention hats, Dr. Rabinovitch, I like older women in a classroom. I think I am now ready to say that I don't think I would want a teacher too recently out of adolescence for this class. I think the younger teachers can be just too pretty and disturbing to work with adolescents who are disturbed. ---- But I think one of our best bets is the teacher whom I've seen in this particular project -- the teacher who has just retired. She's done her stint, and she's taken this new assignment as a kind of half-time, full-time job, not because she needs it especially, but she has a reservoir of talent and ego strength and she's putting it to use; she is relaxed for she could quit any old time because she's retired.

Rabinovitch: ---I think we've got to begin to talk about what we can do together. Many of the questions that have come up have related to the role of the psychiatrist in special education, and I certainly agree that the psychiatrist cannot see himself or function in terms of a hierarchy, as a kind of an expert who has all the answers. This is not reasonable at all. If a psychiatrist knows these children well and is able to work comfortably with teachers, he should. If he doesn't, he can be useless or very harmful. Of course, we know that. On the other hand, under what we hope would be relatively good conditions, I think there is a great need for multi-discipline operations. You think of the practical situation. Just recently we admitted a girl to Hawthorn because of long-term school refusal and anorexia; she had not left home for six months and was dangerously undernourished. We had studied this patient in the clinic and we knew a good deal about her. Of course we had to tell the teacher what we knew. It was important that the teacher have some idea about why the child had attempted suicide through starvation and why she had been unable to attend school. We usually find that a good teacher will handle a child insightfully on the basis of her knowledge of the child -- the history, diagnosis, and dynamics -- as full as possible an understanding of the child's situation outside the classroom. You don't have to outline for the teacher too much about specific handling; their understanding of the child's background tends to make them sensitive to handling needs. Certainly the psychiatrist doesn't tell the teacher, "Give this kid multiplication tables," or "Sit Nellie next to Johnnie in the classroom," or "Encourage the child, she's depressed." The communication is more professional and more meaningful. On the basis of appreciation of the child's background and the dynamics, the teacher handles the situation within the classroom spontaneously, using her relationship and materials. There is another important element, however -- the psychiatrist must be available when troubles arise. In a hospital the ward staff is delighted to send the children off to school but there are times when the teacher must have the right to send the child back to the ward. This is a mutual kind of thing. In our setting our teacher can call at any time and say, "Look, Johnnie isn't ready for school today," and a child care worker will pick him up and take him out to play ball or return him to the ward or do whatever can be done at the time outside the school. There is, then, great need for mutual intercommunication and work together, recognizing that the psychiatrist will in a sense be a consultant to the program but, as a member of the team, with the teacher maintaining spontaneity and full authority within his or her own setting. And don't forget that the teacher by his observations communicated back to the psychiatrist makes a crucial contribution to the total understanding of the case.

Kvaraceus: Almost in self-defense, my feeling about the teacher's self-concept is that it's much too depreciative. She's a prestige person because she sees the youngster often and she has the most extended relationship with him. She is such a key person in the setting, but I am afraid she herself fantasizes about the psychiatrist. ---- I think psychiatrists are some place on the totem pole and it's probably pretty high on the totem pole for various reasons. But it's a question of how the teacher herself perceives the other person; I'd like to work with a teacher on this particular problem.

Question: Would Dr. Kvaraceus please elaborate on why he feels that many children from the low socio-economic class need different types of curriculum and the kind of curriculum he would envision for these children?

Kvaraceus: I presume that this question relates to the general thesis that makes the problem of the big cities, curriculum-wise, center on the lack of cultural readiness in which the motivation problem is very severe and depressed against the middle class curriculum of cleanliness and college. I hope I am interpreting this question correctly. There is a reality of the world, and I assume that stratification in American society will continue after this conference -- that there will be upper middle class people whose way of life varies more than a little from that of people in lower class milieu, that there will be different ways of life, different values, and that it will be much easier to work in a suburban community where everybody hopes, prays that their youngster will get through high school and into college and also will have the means to send him there.

It may not be so easy where there are all kinds of obstacles. The concern of the Great Cities Program currently being sponsored by the U. S. Office of Education and Ford is inquiring into instructional programs. I have a feeling that there has been too much concern with counseling and not enough with curriculum so that if we have a youngster who is on an exit interview, on the way out, about all we can say to him is, "Look boy, you haven't been able to take it, and we wish you'd stay around and go back and be happy with an unhappy situation." ----

Many youngsters come from a lower class milieu, and they will not be readers of the New York Times Sunday supplement. I don't know what you did during your Sundays when there was no New York Times, pretty empty days. Well, for some people the days are still quite full because they never read the New York Times.

What kind of a curriculum could we develop for youngsters who will not go to college or through secondary school level. Well I wish I had some validated research with which to answer, but I think the answer will come out of the reorientation of the school in terms of certain life adjustment needs with a strong hold to reality. ---- We need some occupational orientation for many youngsters if we can predict what kind of occupation the youngster may get into, a job that will not be evaporating in the near future. I would assume that there would be a strong occupational concern to help people get ready for real jobs if we can predict what those jobs will be or answer the question, "What kind of basic occupational skill can be transferrable from job to job?"

The other very important part of the curriculum would be centered on, "What do you do with your leisure?" ---- There has been a euphemism used occasionally; instead of talking about lower-class milieu, you say workingmen's class. Well the working man today is a man of leisure, and we professional middle-class people are apparently the working class. You know what you do on weekends. Well, for those people going on to college they need little training in leisure, but for people who will be on a 30-35 hour week or even nonemployed but with time on their hands, I think there remains the major question, "What do you do with your leisure time?" We have to build in some kind of a program for youngsters. Now this doesn't need to be a grasshopper program. You're not just jumping around happily, skipping around. No, there are all kinds of productive, creative uses of leisure time from the point of view of lay participation in all kinds of interesting, exciting activities that go on in the community. I think we have to rethink what the school is doing to prepare for actual leisure time expectancy.

Just to reassure you that this is a school that's recognizable I should have added, "Yes, these kids are going to need communication skills." So I would say communication skills as the core, occupational as a concern and core, and leisure time as a core, recognizing the fact that not everybody is going to be a reader of the New York Times and that there is an awful lot of other stuff that they're going to be looking at and doing. I think we have a kind of perjurative sound when we claim that our middle-class way of life is close to ideal. --------

Rabinovitch: I want to ask you a question if I may. We in Michigan have been very much concerned about trying to develop some special curriculum for our large city, our culturally deprived kids, of whom we have many thousands. We've done it in a few places, and we've had troubles. We simply cannot get teachers to handle these children. This is true, I understand, in other states too. I've recently had some meetings with research workers engaged in studies of the personality background and needs of teachers required for these special classes for the culturally deprived. It's hard to do a creative job with children desperately angry, full of counter-aggression for reasons we well know, with limited motivation for learning, and with overwhelming anxiety about unemployment and limited status for their families and all the other things we are aware of. The question is raised as to whether well-meaning young and retired teachers for that matter can step into this kind of situation without specialized training. I am wondering whether the special education techniques that have been developed in our in-patient units and our special classes for disturbed children might not be applicable here along the lines you suggest, a tolerance for difference, an expectation of counter-aggression and the development of techniques to handle it, a long-range goal expecting minimum immediate gain. I would hope that this is a challenge that special education teachers for the emotionally disturbed will look into; I can think of no greater possible contribution in the years ahead.

Kvaraceus: There are so many different aspects of this problem. We are very much concerned in Boston, trying to get student teachers to do a practicum in the depressed areas. I would like to follow these teachers up and see whether or not they will take refuge in clean suburban Newton or whether they will go to the Roxbury section of Boston. Where is life hard, where is life easy, and where is our commitment?

While working with UNESCO I ran into a new kind of job -- the educateur. I tried to find out something about this job, to get it described and get it evaluated. I discovered that this was an omnibus worker who was trained in the various disciplines, albeit very thinly. You could almost see the veneer crack. Nevertheless, this worker had several skills and had mastered the technical vocabulary of the other disciplines to a degree. This can be helpful or this can be dangerous -- a little knowledge, you know. Generally, he had a brush with, psychology, psychiatry, the social work area, the recreation area, and education -- this kind of a spread. This person might be placed in an institution or in a community. Often he looked like a detached worker, but he saw the child and the family a great deal, and on very bad hours. When most people go off the job these people were going or staying on the job. They had this very uneven off-beat kind of deal. What these workers showed was a high degree of commitment, a close relationship, and broad interdisciplinary training but their occupational life span was less than ten years. This type of worker is now being trained in Canada and some interest has been expressed in the U. S. A.

Question: How do you approach the problem of resistance to learning when the school program, possibly the supervising teacher and the principal, and others do not recognize the needs of such children, and the home environment does not motivate or stimulate the desire to learn? Or another situation that exists -- you make a referral to the child psychologist or the bureau of child study, if you have such in your city, and they write up an elaborate report that this child has a delinquency pattern, that this child is emotionally disturbed, and the report is put in file drawer number 34 and there it sits and the child is still in school. I'd like Dr. Rabinovitch to answer this question because I know that he had some ideas for a local school system in Michigan, and I understand they weren't too happy with these, and so he got himself elected to the board of education, and now I understand their attitude's changed a little bit.

Rabinovitch: Well these are such broad questions that it's awful hard to discuss them. ---- There are three areas in which we operate, and we're pretty practical about this. I mean we can afford to be at this point. We've had enough experience, many of us, and we're not at a theoretical level in this. ---- We know we've got these three kinds of programs developing all over the country. And with the emphasis on community based mental health programs in the President's program this year, which will probably receive a tremendous appropriation, there'll be awful pressure to establish on a crash basis mental health services at the county and local level rather than at the state level. We're going to see developments, obviously, of three things: (a) there will be in-patient treatment programs for severely disturbed children; (b) there will be day care programs attached to clinics or hospitals; and (c) there will be classes for disturbed children in the public schools.

Now the question is which children belong in which. Let me say that by and large those schools that have set up special classes have had some trouble with them. Number one, the concentration of severely disturbed children in one class or two in a regular school makes for great difficulties, and there is no neutralizing factor. You can't send them to anyone else; the teacher is alone with them, and this creates problems. Secondly, there's been an unreasonable feeling that these disturbed children will rapidly be ready to move back in the regular class, and many are not. If you start with two classes of, let's say, eight children in each, sixteen children, and within one year eight of them are ready to go back to a regular class, you're doing very well, obviously. What happens to that other eight? They stay and then the next year they still stay, and you end up with a residue, and you've got children who will need years of special education, sometimes because they're severely disturbed and often because their families are severely disturbed and minimally accessible to therapy. You may say, "Well, let's not take any children into these special classes if their families can't be worked with." Well, then we'll exclude them totally from schooling. But except in a clearly unmaneagable situation we can't and won't do that. The child who may need the special program most is the child whose family is not responsive to therapeutic intervention. Our sickest families tend to send us our most troubled children. It is most important that we recognize the chronicity of some of these problems and help our teachers and their administrators accept the fact. The young teacher who feels called upon from either within or without to send all her children back to regular classes after one year of special education develops an unduly negative self-percept as unfair as it is unreasonable. Of course there are children who cannot be handled in the public schools who need to be in a more protected clinic-type setting. Day care centers attached to clinics or hospitals must be developed for these. Often they can return to special education in the public schools after a period of more intensive multi-discipline help in the day hospital, but it is most important to get them out of the public school class when it is clear that their need is for something else. Another group, of course, requires in-patient hospital programs but this is another story. Generally it's just a small number of children who belong in the clinic or hospital setting who make the public school program so difficult. The point is to spot these few children early and step in at the right time to move them into a more appropriate program.

Finally, in relation to this, let me say that we are not sure of the criteria for specific placement of children, and there is still a need for experimentation with trial and some expected error. It is only through this that we'll learn. Professor William Morse at the University of Michigan has, many of you know, just completed a national study, through the auspicies of the Council for Exceptional Children and the National Institute of Mental Health, of classes for emotionally disturbed children throughout the country. I believe that Bill Morse and his group have started with the teachers, interviewing them, learning their views as well as those of administrators and consultants. On the basis of this study I think we'll all have a much better idea about present facilities and possibilities and I am willing to predict that one of the findings will be a need for much greater coordination within the schools, clinics, day care centers and hospitals. The Morse study is particularly timely in that its findings can be of great help to the projected new psychiatric services for children now in the planning stage. CEC is to be congratulated on sponsoring this historic study.

Question: Could Dr. Kvaraceus describe any new research or implications derived from the Delinquency Proneness Test?

Kvaraceus: I think its rather reassuring to get a question to which you can say simply "Don't use it." It hasn't enough predictive validity yet to be used in a perfunctory way. The research following a good before-and-after study design did reveal that we do not yet have a valid and reliable instrument -- I make no exceptions -- that is as good as the skilled and continuous observation of the classroom teacher. The teacher herself did a better job of prediction of the future norm violator from daily observations than any of the instruments we used, my own included. We ought to get the teacher observing more closely, watching on significant dimensions that you could find listed in any number of publications on delinquency. Perhaps I have become overly cautious on prediction.

Question: This is addressed to Dr. Rabinovitch. In the 1954 publication of the Yearbook of Neurology and Psychiatry, I think, there was a very crucial article with respect to reading disability. Dr. Rabinovitch, your research shows that the children, at Hawthorn I believe, had consistently a difference with performance and with verbal IQ. I think the average difference was about 20 points but no case had the verbal equal to or higher than the performance. This has been quite different from a number of other studies that are reported in the literature. Again with children who are very much along the lines of primary reading disability. We have been wondering whether or not there could be some population differences between outpatients and clinic -- and I believe that this was mostly an in-patient group -- and also if there's a possibility that this was one of the criterion measures used for selecting your patients?

Chairman: The question concerns an article written by Dr. Rabinovitch in which he reports reading disabilities and the relationship to IQ factors, particularly on the WISC and the fact that subsequent research may have slightly different results.

Rabinovitch: First of all, the concept of a primary reading retardation of a neurologically determined, perhaps familial dyslexia you might say, an old concept which is coming back more and more into recognition, really was the major concern of that article. There were 20 cases reported of primary and what we call 20 cases of secondary. We recognize that reading level is only a symptom, just as delinquency is or IQ. It is not a diagnosis, of course, and among the children who are reading poorly we diagnose two main groups, or now three or four main groups. One we call secondary -- that is, emotional blocks, depression, anxiety, interfere with learning, and the child reads poorly relative to his mental age. Secondly, there are what we call our primary cases in which the problem is not secondary to an emotional difficulty but represents a basic neurologic deficit. Now one of the distinguishing features in our primary group has been a relatively lower verbal IQ than performance IQ so that it is true that, in the twenty cases that we reported, the mean difference was approximately 20 points. A recent repetition of this study using a much larger group of our patients and carried out by an outside worker has led to the same finding, and I just don't know why your findings are different. One factor could be the age of the children. The older the child the more likely the verbal IQ will drop while the performance tends to remain stable; this is in large measure because the information and arithmetic subtests on the Wechsler become progressively lower.

Question: Could you comment on a child who has an IQ spread of 20 points on the verbal and the performance?

Rabinovitch: Well, I couldn't really except to conjecture .... I don't think we've learned all that we can from study of the Wechsler. I don't think we really have learned to use it well enough. I can only say that some of the old ideas we had -- for instance, that block design would be low in brain-injured children because they would of necessity have a visual motor defect -- are not confirmed. And I might say that children with a symbolization defect in the primary reading group often don't do badly in coding, interestingly, because their visual memory is adequate. There's very little symbolization involved in coding; copying and visual memory remain intact, interestingly. I would just at this point guess that where you have a big spread between verbal and performance, your verbal being very low and your performance relatively high, in the absence of specific emotional blocking or negativism, I think you would suspect a primary language problem. In the other extreme, if you have a very low performance score with a relatively high verbal you have one of two problems usually -- encephalopathy or schizophrenia. It is very interesting how frequently our schizophrenic children do poorly on performance tests for the simple reason that they're timed. When you have a low performance with a relatively high verbal, you have to ask whether preoccupations, or autistic lapses, or something similar interfered. Some of our brain injured children, as you know of course, have real difficulty in visual motor organization, revealed in poor functioning on block design and object assembly subtests, for example. But these are generalizations that need a lot more research, and I'm delighted that our own earlier work in relation to specific Wechsler profiles in reading disabilities is being repeated. If differences are found, we'll go back and re-examine our data again because there is need for avoiding generalizations from one sample. Of course, we'll want to re-examine your data too.

William C. Kvaraceus, Professor of Education
and Director of Youth Studies, Tufts University,
Medford, Massachusetts, and Ralph D.
Rabinovitch, Director, Hawthorn Center,
Northville, Michigan

HIGH SCHOOL DIPLOMA - A "MUST" FOR THE DEAF

Alfred J. Lamb

Every deaf youth in the United States deserves an opportunity to earn a high school diploma. His hearing brothers and sisters have this opportunity because the general philosophy in the public school systems is to give everyone an opportunity to get a high school education. In the world of employment a high school diploma is becoming a basic requirement, especially for youth seeking their first jobs, who have little or no work experience or special skills.

Educators of the deaf must redouble their efforts to assure every deaf youth an opportunity to earn a high school diploma. To deny the deaf this chance is tantamount to placing them in the position of the nation's dropouts. Thus, we are contributing to what is considered by many to be the number one problem of educators today.

Consider, if you will, the employment situation in which the deaf youth leaving school finds himself. The nation's unemployment rate has been over five percent for the past five years. Secretary of Labor W. Willard Wirtz speaking in support of the President's retraining and youth opportunity measures predicts that young people entering the labor market could boost the unemployment rate to seven percent in the next four years. For a youngster without a high school diploma and with the additional handicap of deafness, this is a difficult situation to face.

Closer inspection of the characteristics of the employment picture should supply us with all the motivation necessary to implement a nationwide effort to extend the educational plan for all deaf students to include a high school education. Daniel Schreiber, Director of the NEA Dropout Project reports:

> About two-thirds of all workers who never completed high school are employed in unskilled or semi-skilled jobs -- as laborers, operatives, household workers, etc.
>
> At least two-thirds of the unemployed men and women in this country have less than a high school education -- and almost all of these unemployed belong to the ranks of the unskilled and semi-skilled.
>
> The present average unemployment rate among 16 to 21 year old school dropouts is 25 percent. As Dr. Conant has shown, this rate is likely to rise to as high as 70 percent in the depressed, slum neighborhoods of our great cities (Schreiber, 1963, p. 216).

It is quite evident that the person without a high school education will have a difficult time, first, in securing employment and, second, in advancing beyond the unskilled and semi-skilled class after he gets on the job.

Industry and business are serious about upgrading the educational requirements of their employees. Not only is a high school diploma becoming established as the minimum requirement for new employees, but also industry is demonstrating its belief in this minimum by providing all its employees additional opportunities to further their education at all levels. At the Indianapolis Works of Western Electric the company in cooperation with the city school system is offering high school courses for 360 employees who wish to complete requirements for the high school diploma or to brush up on other courses. The cost to the employees is one dollar per credit course. Classes are housed in the Western Electric plant, and they are scheduled at times which permit all interested workers, regardless of their working hours, an opportunity to attend. Enthusiasm is so great that construction of special classrooms for typing and biology at a cost to the company of $7,000 is under consideration.

Further evidence of industry's interest in advanced education for its employees is found in the number of scholarship grants made to individuals who choose to take additional formal education. In some cases only job-related courses are approved for grants. In other cases there are no strings attached, giving the employee freedom to exercise his own judgment regarding the direction in which he wishes to advance.

Few residential schools for the deaf in the United States offer a complete high school curriculum. In discussions with colleagues teaching the deaf in day classes and day schools, it would appear that the greatest obstacle in providing a complete high school program is lack of a sufficient number of high school caliber deaf students to justify a special program at the secondary level. Consequently those deaf students who are unable to be integrated into the regular public school program at the secondary level, with or without the help of resource teachers and therapists, are dropped from the special program at the upper age limit of the particular school system in which they happen to be.

The question arises as to how large a school must be to provide a high school curriculum for deaf students. The idealist would contend that as long as there is one deaf student capable of achieving at the high school level the teacher(s) and facilities should be made available to do the job. As realists we know that this is not considered practical by the boys who dole out the tax dollars for education.

The Indiana School for the Deaf has had a high school program since 1942. Until 1958 a single track diploma plan was offered. At that time a four diploma plan was inaugurated in an effort to provide a more comprehensive high school program. Total high school enrollment is usually about one hundred. As a general rule about 55 percent of the high school students participate in a diploma plan. The remaining students are placed in a special program leading to a certificate of attendance.

Under the new plan four types of diplomas are offered, each of which is a valid high school diploma meeting all of the state requirements. The type of plan pursued by the graduate is designated on the diploma awarded him on commencement day. Briefly the four types of diplomas are: (a) general, which requires passing marks in seventeen units, (b) vocational, which requires a "C" average in sixteen units, five of which must be in the vocational area, (c) regular, which requires a "C" average in seventeen units, (d) academic, which requires a "B" average in nineteen units.

The typical schedule for a high school student consists of two periods of vocational class work, five academic classes, a study period, and a thirty minute activity period. With this broader curriculum offering, students of like abilities tend to group themselves in their selection of a diploma plan. This selection is made in consultation with the guidance director, student, and parents. A four-year plan is drawn up on a plan sheet. Both parent and student sign this "contract."

The brighter students who usually elect to go for the academic diploma must choose the more advanced courses in mathematics, science, English, and literature because the majors and minors required for this plan make this mandatory. These are the best college prospects.

Students who try for the academic diploma but fall short, either because they cannot maintain a "B" average or because they are unable to take the advanced courses, may still earn the regular diploma if they maintain a "C" average.

The general diploma, like the regular diploma, requires fewer units of credit and allows placement of a student in an extra study hall or two if he needs this time. These are the poorest high school students and our greatest concern because they are borderline cases throughout most of their high school careers.

While the vocational diploma requires one less unit than the general or regular diploma, it requires one more vocational unit, which involves a double period for an entire year. It also requires a "C" average which removes it from the snap course category and makes it a respectable diploma.

At the outset it was felt that admittance to the high school program should be limited to those who complete the normal program for the tenth year in school with a minimum achievement level of sixth grade as measured by the Stanford Achievement Test. After some five or six years experience with the diversified diploma plan program, it is felt that an additional year of preparation for high school would be beneficial. During this year concentrated work on the essentials -- reading, arithmetic and language -- could be emphasized. Perhaps the minimum achievement level could be raised to seventh grade. This preparatory year should also include an orientation program comprised of such things as developmental reading, use of the library, development of good study habits, health and safety and other related guidance materials.

A high school program which attempts to be a comprehensive one cannot neglect those of high school age who do not progress academically. It is in this area that it seems almost impossible to provide a suitable program with the limited personnel and facilities available. In the first place all types of individuals are found in this group, not only those of limited mental ability, but also the socially and/or emotionally maladjusted, the non-achievers, and the high school washouts. Stanford Achievement levels may range from the third to the sixth grade level. IQ's may range from 70 to 120. Also in this group may be students with additional handicaps such as cerebral palsy or vision defects.

Perhaps the one thing these students need most is a teacher who understands their problems. It is difficult to find a fully qualified teacher of the deaf who is also well qualified to teach children with other exceptionalities. These students also need to be taught in small groups to provide sufficient time for individual attention.

In Indiana these students are placed in the certificate program, which is basically a two-year program. The academic area includes reading, language, basic math, general business with emphasis on personal affairs, and social studies with emphasis on civil government. Reading courses include material on occupations, current affairs, personal hygiene, and other information deemed important to the young adult about to join the working forces. Usually four periods are devoted to academic subjects each day and the other four to vocational classes on campus or a work program off campus. This group is the one which most needs assistance in the transition from school to job. Cooperative programs with sheltered workshops and local industry have proved most helpful in some cases.

In the final analysis it would appear that only two major obstacles stand in the way of providing a comprehensive high school program for the deaf. The first is the shortage of trained teachers of the deaf. Since the passage of Public Law 87276 some four hundred or more teachers of the deaf are now being trained each year compared to one hundred to one hundred and twenty-five being trained only two years ago. If this program is continued, the shortage of trained teachers may cease to be the number one problem.

The other great obstacle is one of time. The deaf need time to acquire the skills they must have to overcome the handicap of deafness. If they are ever to close the educational gap, they must be given more time in an educational program tailored to their needs.

Educators of the deaf have been saying for hundreds of years that the deaf child cannot be expected to progress at the same rate as his peers with normal hearing. It has also been estimated that the average deaf child is two years educationally retarded when he enters school. If we accept the latter statement alone as true and assume normal progress, an educational program of fourteen years' duration would answer the problem of time. A five-year-old beginner would graduate from high school at nineteen.

Anyone who has taught the deaf knows that this is a false premise. The other factor to be considered is the slower rate of academic progress. If we assume the annual rate of progress to be six-tenths of a grade, the deaf five-year old beginner will require twenty years to complete twelve grades, and he will graduate when he is twenty-five. If he is able to achieve at an annual rate of six-eighths of a grade, he will graduate in fifteen years at the age of twenty.

These figures should help to pinpoint the time problem. If twelfth grade achievement is set as the standard for a high school diploma and nothing is done to provide additional time for the deaf student's formal education, only the exceptionally bright and the highly motivated will earn high school diplomas. This appears to be the general picture throughout the United States today.

It might be appropriate to bring before this group some of the issues involved in the efforts to buy time to overcome the educational lag.

Should there be a hard, fast rule regarding upper age limit or should the rate of progress determine when a student's educational career is to be ended? Adult education classes are encouraged for the hearing, and nearly everyone is urged to return to school to finish his high school career or to get additional training. Why should the deaf student be denied this same privilege in the only institution which really knows his learning problems? Forty-five percent of our graduates take further training elsewhere within three years after they leave school.

Educators of the deaf have constantly complained because they do not have enough time with the deaf child to overcome the educational lag. Here again, perhaps, we should look to the public schools. Each year more and more public high schools are opening their doors in the summer time. Some are offering full-fledged programs; others are concentrating on remedial work during the summer; some carry on a combination recreational and educational program.

Would it not be good business to operate a school program in the school for the deaf for a period of two months during the summer? If so, should this be strictly a remedial program? Should it be a program for a select few who show promise (these could be selected very early in their school careers), or should it be open to all? What kind of program would best serve the needs of the deaf child?

Should we not be investigating more thoroughly the attributes of finger spelling as a method of communication which is more rapid than other means of communication for the deaf and just as accurate as the printed word when properly used? From the limited reports we have seen this holds great promise.

Due to the sparsity of deaf population who may benefit from a comprehensive high school program, should regional schools be given further consideration? In the interest of economy, advanced vocational schools could be combined with academic high schools, thereby attracting larger numbers of students and making a more comprehensive program possible. There is much to be said for a high school program which is completely isolated from the elementary school. Much support for this type of program can be found in the educational literature which has brought about the establishment of separate junior and senior high schools in public school systems.

Would it not profit all of us to lend our support to the newest efforts to expand the activities of Captioned Films for the Deaf? Under the direction of John A. Gough present plans call for utilization of the talents of the best qualified teachers of the deaf in the United States to develop materials specifically designed for use in classes for the deaf. These materials, geared to modern curriculum content, may develop into one of the time-saving media we need to help bridge the gap.

Hearing children have all the natural advantages that their sense of hearing gives them plus the advantages of man-made educational tools and facilities such as television, radio, consolidated schools with comprehensive programs, summer schools and so on. If the educational gap between the hearing and the deaf continues to widen we shall see the day when our deaf youth will enter the working world as second class citizens. We have a professional and a moral obligation to provide them with the means to earn at least a high school diploma.

References

Schreiber, Daniel. The dropout and the delinquent: promising practices gleaned from a year of study. Phi Delta Kappan, February, 1963.

Alfred J. Lamb, Assistant Superintendent,
Indiana School for the Deaf, Indianapolis

MORE EFFECTIVE TEACHING PRACTICES FOR EXCEPTIONALLY TALENTED CHILDREN: ASPECTS OF ENRICHMENT

James A. Lane

I wish to impart to you some of the reflections the Worthington school system has had on various facets of the issues involved in enrichment. We firmly believe in the concept of a comprehensive program and all that this implies regarding decisions based on individual differences with such considerations as: early identification, acceleration, ability grouping where appropriate, cluster grouping, individualized scheduling procedures, advanced placement programs, summer school provisions, and group and individual guidance procedures which explore with the student an array of possibilities.

Understandably, we would not have time to explore all of the relations and facets of each of our programs and how they have developed through the professional acceptance and responsibility and dedication of the professional staff. In the selective process it has been necessary to center upon these aspects of enrichment which our reflections have found sound and in the interest of meeting the needs of exceptional youth in a variety of settings as well as our own. The attempt then will be to provide some of the behind the scenes considerations necessary to see enrichment in a new light. We may discover that enrichment provides much more of a kaleidoscope of human dynamics and program development than the literature heretofore has acknowledged if we reconsider such topics as: identification processes, administrative aspects of enrichment, guidance opportunities, professional staff growth, instructional procedures, and evaluation of the product.

Let us state further that program development takes time, maturity, and finesse with continuous evaluation. A sound and comprehensive program simply does not arrive full blown. It should perhaps be built on some of the more comprehensive principles outlined by Clifford Williams (1958, pp. 147-165) or the ten cardinal principles stated more recently in The Gifted Student (Southern Regional Project, 1962).

Identification Processes

Our identification process begins with the kindergarten and, in isolated instances, the prekindergarten level. Parents and teachers are encouraged to refer for psychological evaluation youngsters whom they believe to possess exceptional degrees of readiness for school work. While there is a policy not to accept youngsters under five years of age by September 31, referral and ensuing evaluation may result in acceleration to the first grade program if early enough in the school year and if social, physical, and emotional maturity as well as family factors suggest that this is a wise measure. Even with this policy, we occasionally face a difficult situation in trying to provide for the exceptional. (In one such instance, the school year was well underway before evaluation could be made. When evaluation was completed, it was discovered the student was reading near sixth grade level on standardized measures, possessed an outstanding degree of maturity in the areas mentioned, and a Stanford-Binet IQ of 155. Since the year was underway, the family felt the acceleration and adjustment might create difficulties and the student was not accelerated.) Similar measures are followed through grade three. In some instances it has been possible to have a student assigned to a combination grade and in others to assign a student to a regular third grade classroom and with coordination to release them for fourth grade arithmetic and social studies, which in our system covers the highlights of Ohio history. These latter routines have been diminishing through our discovery that at fourth and fifth grade levels, these students retain a degree of social and emotional immaturity which can successfully be handled in the classroom but which creates barriers to their full participation in our "enrichment seminars."

The program which I will be describing for most of the remainder of the time will focus on the seminars held twice weekly for one hour for students in grades four, five, and six. At present students enrolled must possess a group IQ test score (California Test of Mental Maturity) of over 130 and be above national grade norm level in a minimum of the basic skill areas by at least two standard deviations. (A few are admitted who are only 1.5 years above grade level if other factors suggest this to be a wise choice.) A breakdown of our current enrollment is as follows:

	4th	5th	6th	Total
Boys	16	31	36	83
Girls	34	26	44	104
Total	50	57	80	187
No. in Grade	296	324	308	928
Percentage	17%	17.5%	26%	20%

In planning for thorough screening processes, even within the exceedingly high criteria, we were immediately confronted with what I shall call the deviation dilemma in which we found that many of the students we wished to include in the program based upon teacher recommendation were not as high score-wise either on group tests or, in some cases, achievement sections on a long form battery of basic skills (California Achievement Test). Teachers tended to pick the neat, conforming, high achieving, "nice" youngster rather than the one with exceptional curiosity and a questioning outlook. Continued in-service education has helped the staff members refine their observation and recommendation processes immeasurably. (One new in-service measure to be employed will be mentioned later under Professional Growth.) We also discovered in the other direction, however, that if we lowered the cutting score from 130 IQ to 125 or as low as 120, figures which many of the critics of education and many publications and opinion would have led us to include, in our system too many students would have been included. At one time with the 125 IQ as a criterion for only one grade level we grew to a total of 209 students, entirely too many students for one teacher to handle. We finally cooperatively reached the point where three lists are created for review by the classroom teacher, the building principal, the seminar teacher, the school psychologist, and the director of instruction. Through review of class record sheets from the group testing program, three relative categories are established as follows:

"P" - Priority status - those students meeting both the group IQ and standardized achievement test measures

"B" - Secondary status - those students between 115-130 IQ but who qualify by standardized achievement scores

"C" - Tertiary status - those students between 115-130 IQ but whose standardized achievement test scores make them ineligible (This is the group others have typically been referring to as the underachievers although there may be a few in either category "B" or "P.")

Students in "B" or "C" categories are evaluated individually, and where circumstances make it advisable they are transferred to the program when qualifications have been met. This appears to be a unique feature of the program: its open-endedness. Students originally placed on "Hold" status have on occasion become our best students. Our program design also makes provision for a thorough evaluation of circumstances surrounding the dropping of a student from the program. (To date this has included three youngsters: one for an exceptionally high degree of participation in out of school activities, one for a related emotional problem, and a third for no apparent reasons other than the parent's wishes.) If a teacher requests such action for classroom reasons, samples of work, classroom observation by psychologist and principal, anecdotal records, and interviews with both the pupil and parents are held to eliminate the source of difficulty if possible.

In all cases being reviewed for the program, the teacher completes a four page evaluation form covering ratings in the following areas: group responsibility (dependability), individual responsibility (dependability), creativeness and imagination, seriousness of purpose, work habits, and social adjustability.

Subdivisions of the above areas cover the following traits: nature of mental ability, degree of curiosity, classroom achievement, judgment processes, oral expression, written expression, creativeness, and imagination.

These are used by the seminar teacher in developing individualized programming. They are reviewed yearly and thus allow cumulative effects to operate both for the new regular teacher for evaluation purposes and the seminar teacher. After travelling through grades four, five, and six, they are summated and used by the junior high principal and staff in assigning and planning for enrichment and accelerated sections in these two years. They are also used for general research and for curriculum recommendations at the senior high level.

In mentioning our own program of identification, it seems appropriate to go a step further and mention that perhaps we have sought too specific a "point" in all of our identification processes nationally. With gifted youth there is no golden "mean," and very likely no absolute minimal set of characteristics. Lists of characteristics were never intended to serve as a universal by which we could sift and label today's youth for special programs. They have been compiled only to assist us in knowing a variety of areas wherein as educators we might gain insight into their nature so as to better plan for them in individual circumstances and local school settings. In reality, we should be stressing the developmental variability at various age levels and how to modify procedures in all areas of excellence or talent within available resources so that exceptional youth may acquire those skills and attitudes which will enable them to be increasingly sensitive to their environment and to develop techniques by which these may be translated and communicated back to the public at large. With this view, there will be varying identification processes used. The extent of procedures will be dependent upon our psychometric sophistication with instruments tapping the potential of a complex phenomenon: the human being. In addition to this, there are varying and relative needs for different school systems to determine the identification process on their own. In our system, dropping as low as 110 IQ on a group test is an impractical measure. It would include over half of our students, but the top one-fourth nationally may be a good starting point for some systems from which they might pursue screening for a specialized and developmental program for exceptional youth. If we are going to use a group test, we should remember to use it only as a screening device for we must be aware that many students are being overlooked. Winefordner in a study not yet published has investigated student populations from three varying socio-economic communities including Worthington.

Screening on the basis of group IQs of 100 to 124 in an effort to verify possible giftedness by means of individual Stanford-Binets, 240 children were included. The sample was felt to be a representative proportionate and stratified sample of students in grades four, six, and eight. Thirty-two gifted children with Stanford-Binet IQs of 125 or more were identified. Had only the group of 150 children in the sample with California Test of Mental Maturity (CTMM) IQs between 110 and 124 been given the Stanford-Binet, thirty of the 32 gifted children identified would have been included. This would indicate that, for screening purposes, a CTMM IQ of 110 could have been used for cutting purposes in this study. It would also suggest that systems should only use group tests for screening purposes; beyond this, they should employ appropriate personnel for the administrative centering of the program and others who would be qualified to prepare or review a variety of instruments for locating the truly exceptional. As I have stated elsewhere (Lane, 1962, pp. 50-57) this does not mean that the Stanford-Binet is the best device for discovering the gifted. However, within the limitations imposed by its ceilings and relatively narrow conceptual base, there is much opportunity for discovering a segment of potential which should be directed.

(An interesting sidelight of this study was that every one of the students whom the teachers rated as having inconsistent classroom behavior showed left handedness as assessed by the psychologist administering the Binet test. Further investigation revealed that all were earning lower classroom grades than matched peers and that although they had a higher mean IQ on both group and individual tests, they achieved significantly less on standardized achievement tests.)

A further practical aspect of the identification process before we turn to administrative considerations is that we are discovering through other studies that group IQ tests can be given more easily and as accurately, allowing considerably more freedom for proctoring by the classroom teacher, through the use of both prerecorded tapes and/or the public address system.

Administrative Aspects

Perhaps one of the single most important administrative aspects of enrichment is that of focusing and centering of all program activities within one administrative staff person. Without such a specification, crucial communication is neglected in the swirl of daily routines of each of the parties involved. A plan of policy and procedure should be developed cooperatively in such fashion as to clarify the role and contribution to be made by each participant. Without such a plan much effort is wasted; misunderstanding and poor staff morale are permitted to arise; and confusion and poor public relations result. As has been mentioned, we center this authority as high as possible in our administrative structure; it rests with an assistant superintendent who serves as director of instruction. Building principals are charged with the responsibility of final placement approval following the recommendation of the school psychologist and the evaluation and approval of both the classroom and seminar teacher. Letters are forwarded to each parent appraising them of the recommendation. As these are returned, four copies of an admission form are prepared. The original is maintained in the principal's office, while the remaining copies are sent to the classroom teacher and the school psychologist. The final copy is given to the student who carries it to his initial seminar session. This form contains the date, the student's name, date and time of the pupil's first session, and is signed by the building principal following receipt of the approval slip from home.

Another reason for establishing a central coordinator is that he is in a better position to assist in arranging schedules for all specialized personnel and hence is in a key spot to obtain maximum utilization of the system's facilities or coordinate a fluctuating and flexible use of key resource personnel. He will be able to suggest availability of materials or assist in drawing up a budget for needed materials. In this latter regard, aside from certain basic materials which will be needed following the scope of the program determined, it seems helpful to suggest that there should be developed a procedure whereby incidental materials may be purchased quickly and without formal requisitioning. Day to day demands of various sections will vary considerably, and supplementary materials are very helpful in a science experiment and art course or even in the construction of a variety of geometric forms. It is also helpful to have funds available to offer minimal travel expenses to various resource personnel, whether it is another staff member, a parent, or someone from industry, business, or a nearby academic community.

Increasing use of curriculum or pupil personnel specialists, the expanding nature of our student population, and the space limitations imposed by outdated buildings pose a problem for many systems who might otherwise develop an enrichment program for exceptional youth. Ours is no exception. While our present plans call for the construction of four new elementary schools and a second junior high school (our present one is designed as an extension of the senior high school and is being absorbed by them at an astonishing rate), space is and will continue to be at a premium. Perhaps through problem solving processes, sudden insight, or sheer chance, we hit upon an idea which we scoffed and laughed at for a year and a half. Then it was presented in a more serious manner, and accepted by our board of education.

We are presently reconditioning and fabricating to our own needs the services of a school bus which while sound was outdated and ready for replacement. Deterioration rates are comparable to automobiles, so the expense will still be a saving when compared to the price of a new classroom. Following the principle that service should go to the student and not vice versa, another problem was solved. Many educators are discussing the relative merits of a resource room in each building, as opposed to central facilities. In our first year of operation we followed the central resource room plan but with the number of students we were attempting to work with, scheduling time was a primary problem. There was also the expense involved in transporting small groups of children back and forth within the system, and the possibility of missing one of the Airborne television programs, (MPATI) or for fourth graders, the all-important "recess" which we decided was needed. I suspect the bus will soon be christened by the students it will serve. In fact, perhaps we should promote this. We hope to incorporate reference materials, a modified laboratory for science, provisions for slides, movies, tape recorders, and perhaps television if arrangements can be worked out. There will be bulletin board and chalkboard spaces as well as cabinets and display space for art projects underway. Heat and light will be supplied by a special generator and a cable hooked to each building for current. Our seminar teacher is still not sure a chauffer's license is what she really needs, but then she's quite flexible when it comes to such matters.

Before we complete our consideration of administrative aspects, we should turn our attention toward the cumulative record system. All too frequently data are either inconsistently recorded or noted in such a fashion as to confuse those persons using them. Frequently reports or screening procedures require incalculable amounts of time simply because information posted is too gross to be of value except to see that the data were recorded or are filed in such manner that the vital piece of information is invariably on the bottom. AASA (American Association of School Administrators) has become concerned with this problem. In a recent report they state: "Perhaps the AASA should take the lead -- along with the U.S. Office of Education, leading graduate schools of education, some state education department heads, and representative school systems -- in developing compatible systems of statistical reporting in identifying the kinds of data to be collected, and in designating selected agencies as repositories of such reports" (1963). This appears to be an encouraging step forward. Systems will need to stay abreast of current data processing and retrieval techniques if they are truly to plan enrichment for exceptional youth.

In our own situation, we studied the problem for over a year under the direction of our junior high principal. While our design is only tentative, we have reorganized spaces so that information is both cumulative and diagnostic at a glance. New sections have been created to signal that specialized handling by one of the pupil personnel specialists is recommended for a pupil. Subsections of our battery of pupil group tests locate difficulty or superiority in an achievement area very quickly. Trends or consistencies in both grades and achievement over a period of years are quickly noted. Two colors are used to assist in quickly counting numbers of boys or girls in a given specialized section or grouping. Data required for addressing envelopes are exposed so that a secretary need not open each folder and risk losing its contents. In reality, it is still quite crude when compared to a modern machine processed system of cumulative records and reporting, but progress is evident.

Guidance Opportunities

Many would question the need for guidance services when considering exceptional youth. With the availability of many recent research reports investigating more fully various dynamics and aspects of both regular and special school programs, we are discovering that there are indeed many opportunities for guidance if we will but be sensitive to the unique needs of our exceptional youth.

There is insufficient time to give a detailed review of some of the more recent research into nonintellectual factors which influence school achievement. However, you may want to investigate more fully the work of James S. Coleman (1959, 1961a, 1961b) on what he terms high school "press," and the practice of American schools to plan away from capturing adolescent energies for learning. We are discovering that various teaching methods are relatively ineffectual with different types of student groups. Gladstein of Syracuse University as early as 1957 was discovering that different methods are necessary for at least three different types: authoritarians, antiauthoritarians, and rationals. The U. S. Navy's finding that certain methods are more appropriate for individuals who seem basically oriented to ask "why" as contrasted with those who ask "how." Ronald Lippitt, of the Institute for Social Research, at the University of Michigan is discovering the significance of positive and negative interpersonal evaluations made by students at very early grade levels. He finds that students are using peers about two years older than themselves as models for their behavior, and that introducing high achiever oriented pupils from the sixth grade to work with fourth grade underachievers results in the fourth graders performing closer to their potential. It would appear that these and other research phases provide a substantial opportunity for the development and use of guidance services.

Herman J. Peters (p. 7) sees the guidance counselor assisting average and exceptional youth in the following areas:

1. Understanding Self
2. Course Planning and Programming
3. College Selection
4. Job Opportunities
5. How to Study
6. Exit Interviews
7. Maximizing One's Abilities
8. Attendance Problems
9. Underachiever
10. Overachiever
11. Vocational Guidance
12. Educational Progress
13. Interpretation of Tests
14. Scholarship Applications
15. Commendation
16. Job Placement

While the following handicaps are not exclusive to exceptional youth, through an enrichment program we have discovered several opportunities for guidance measures:

1. Social exploration by parents and others
2. Peers of similar mental ability have superior physical advantage
3. Excessive quickness with a resulting inaccuracy
4. Tendency to be perfectionistic with certain products and resulting inadequacy feelings

5. Bossiness; believe that their way is the only way and that the contribution of others is not worthwhile
6. Responsive to the moods of others and occasionally too concerned over others' welfare when factors are beyond his control
7. Lack of companionship; sometimes find their pursuits too quiet for rest of classmates
8. More sensitive to his environment
9. Because of his variety of interests, finds it difficult to stick with one.

We have preferred to look upon these handicaps as temporary stumbling blocks rather than maladjustments. In most instances we have found that the seminar teacher or the classroom teacher could assist a pupil with his situation. Parent-teacher conferences are scheduled and encouraged; by arrangement the building principal, the school psychologist, the school principal, the school nurse review circumstances with both parents in a conference, thus promoting a close relationship in removing adverse effects before they become entrenched into operating modes of behavior. There are many opportunities for guidance in our community because of the interest of cooperative parents.

Professional Staff Growth

An important aspect of enrichment is the degree of professional growth of staff members. It must in itself be a continuous process by which members of the profession remain alert to recent research into features of curriculum development which will permit them to focus on involving pupils increasingly in the discovery of ever enlarging systems of knowledge and the processes by which it may be translated and transmitted. We are fortunate in having several fine colleges and universities within a ten mile radius of the school campus. The boundaries of growth do not stop here, however. There are grade level meetings, various curriculum study groups, various system wide study groups (survival education, team teaching), and action research groups (high school mathematics department study of the field effects of programmed instruction) which foster professional growth. In addition to these, there are administration sponsored semiannual workshops on various topics. These take place on released school time. In two recent years, voluntary staff seminars were held to keep staff members up to date in recent technical developments in the field of science. Leaders from business, industry, and the university presented information. These were open to interested advanced students as well and ran for a period of 15 weeks each. This year there was available for the second time an art workshop carrying professional growth credits toward salary increments. Enrollment in all courses in our evening adult education program is available free of charge to staff members beyond a minimum required enrollment of 12 members from the community. In addition to any of these programs, staff members may submit summaries of related work or travel experience for professional growth credits. Two years ago this staff committee expanded the growth concept to include independent research projects and publication of articles by staff members. A system librarian orders recent publications requisitioned by staff members. These activities and others like them could be made an integral part of enrichment practices in any system. Increased professional effort is required in a society as pulsating as ours is becoming. New means must be found to capture the essence of previous history and accomplishment so that we may discover how to relate it more thoroughly and efficiently than ever before. This demands professional involvement and commitment and awareness.

In a staff meeting in two of our elementary schools we will soon explore, by a means of pre- and posttest attitudinal checklist, present levels of teacher insight into the nature of dynamics of the behavior of the gifted. We hope this will be a phase of professional growth for our staff. We will play a prerecorded tape scripted and compiled by Mr. Robert McDonald of The Committee for the Advancement of Special Education. The narration will include direct comments by various leaders in the education of exceptional children and a series of comments by one outstanding high school youth regarding his feelings on issues created by present day school practices. We hope to investigate possible differences in the attitudes of younger and older staff members toward gifted youth. Jean Weiner's (1960) pioneering dissertation research in this area suggests that there are significantly less favorable attitudes held by teachers between the ages of 20-29 than in those between 30 to 49 years of age. This has not been our own experience but seems worthy of pursuit as one more aspect of enrichment in professional growth.

Instructional Procedures and Materials

For many, the instructional procedures will be the central aspect of enrichment; for others, as for us, it is only one phase of the larger considerations involved. In establishing a program, the purposes and objectives sought should be decided upon early in order that other plans for materials, space, time, the identification process, etc. may be concurrently set in motion. No statement of objectives can at any moment remain placid and succinct, for with evolving relationships between what is known or comes to be known and those questions which remain unanswered, no purpose may continue static. Here however, briefly are seven excerpts from the major objectives we set for ourselves in promoting program development:

1. Our purpose is NOT to teach subject matter as such; this is being ably accomplished by our classroom teachers. Our purpose is to capitalize upon as many different types of incidental learning as the individual can organize and make use of.
2. Through attention to feelings of the youngsters involved, it is our purpose to create, develop, and nurture a climate or atmosphere in which group and individual forces may be unleashed and cultivated.
3. Our purpose is to help youngsters retain their autonomous personal individuality while learning to become aware of and accept increasingly the responsibilities demanded by the group. This we conceive to be a development of the expectations of society. It is our intention to help youngsters build responsibility to themselves, to society, and to one another.
4. A fourth purpose is to help students discover that learning can be fun and that seeking knowledge should be and can be satisfying in its own right without thought of further reward. Our purpose will be to "uncondition" them to extraneous rewards like grades, or "a dollar if you get a hundred." Further, we hope to help pupils look more realistically at what they achieve and to help them accept their product tentatively for what it is; and to accept themselves for the moment. This saves the youngster from continual worry over their product which often results in their misunderstanding themselves, destroying their own self concept which leads to further lack of motivation and pursuit of mediocrity rather than a reaching for the more discriminating response.
5. As a fifth purpose we hope to help them accept societal responsibility for the daily routine as well as contributing to the furtherance of the changing culture. In essence, in each of these facets we are attempting to build an "adaptiveness to living" through attention to evaluation of the situation by using their full potential to size it up, and by making full use of knowledge tempered by common sense and past experience to move into the problem seeking a solution.
6. Purpose six surrounds developing an awareness of the structure and organization of the environment as well as their own unique profile of strengths (capacities) and weaknesses (limitations) in meeting various segments of the ordered environment. (This process begins very simply with an inventory of pupil interests and experiences by which the seminar teacher comes to know them better.)
7. Our seventh major purpose is to extend the store house of factual knowledge which the children bring to the program. We have discovered that they have phenomenal memory facility. We encourage these by products when obtained by the processes set in motion when they delve more deeply into both familiar and new subject matter and acquire finesse in handling new information. We hope to have them turn increased attention to application of basic study and reference skills and those mechanical procedures necessary to release the information required in evaluative and divergent-thinking, problem-solving, and decision-making.

It is difficult to describe the what and how of teaching in the various areas. While we agree with Ernest Newland that much needs to be done in basic research relating specific groups of youngsters to specific types of procedures, until more funds and personnel are available, the demands of the local situation will continue to take precedence. In our program most learnings are of an integrative nature. Seldom do we say we are doing something because we want to learn a specific skill. Rather, the emphasis is on reflecting upon the processes we used, establishing whether others might have done better or as well in accomplishing a goal, and preparing for individual and mutual criteria for future similar situations. The factual aspects, or by-products as we choose to consider them, may be thought of in terms of the following curricular undertakings: the language arts, including creative writing; contributions of mathematics and numbers; science products and the experimental concept; social studies; foreign language and its cultural implications; and aesthetic experiences in art, music, and related crafts.

Language Arts - Emphasis is placed on the development of a greater facility in the use of the English language. Oral and written expression are mediated through the individual project. Some of the areas touched upon are:

1. Creative writing of poetry and stories both from predetermined random-order lists and free form expression of feelings and reaction to an incident, persons, and people, objects in the environment -- or at upper levels, toward abstractions, symbols, and feelings.
2. Establishing through group discussion the nature of an autobiography, listing criteria and deciding either what to leave out or include to make it of interest.
3. Analysis of communication itself, from variances in meaning of similar words to a survey of the effects of various media on different groups of audiences.
4. Preparation for writing - Compiling lists of descriptive words, ideas for expressing themselves, feelings about a topic, or a combination of these.
5. Poetry as a means of expression - Much poetry is read to them, some serious, some for fun, some for rhyming or blank verse. Discussions following range from a development of awareness of the beauty of expression in poems and how words are musical, or witty as a comedian, to how they may paint a picture as vividly as a painter. Reasons as to why an author wrote as he did are explored and much biographical material is brought into use. We are looking forward to the arrival of Cradles of Eminence, released by Little, Brown, and Company of Boston. Its authors, Victor and Mildred Goertzel have reviewed a study of the childhoods of over 400 famous 20th century men and women.
6. Development of the discriminating response - Students at fourth grade level come to us feeling that most important information must be copied straight from the source book; they are afraid to omit a word, yet will skip the information included in a series of paragraphs or pages. We encourage the development of outlines and note taking both from books and visitors to our sessions who speak on various topics. Improved listening skills are a necessity for all youth, but we feel it is especially important to capitalize upon it in our seminars. A transition in these skills takes place so that by the sixth grade the children are sifting, sorting, and perusing several sources for report information. Documentation and processes to determine which facts to include or leave out are stressed. Spelling and report structure are as individualized as possible. Clues for improved hand writing are suggested to the student and his regular classroom teacher.

7. Extemporaneous speaking ranges from selecting pupil made topics and speaking for two minutes to a prepared two minute talk, to a prepared five minute talk with illustrations. Discussion and constructive criticism of the difficulties follows each presentation.

Contributions of Mathematics and Numbers - Emphasis is placed on the understanding of the relationships between numbers, mental arithmetic, and a general review of what they have already learned. The finiteness of number and the necessity for accuracy and following a logical process through to the solution of a problem are discussed. Attention is turned also to the variety of methods which might be used to solve a problem. The seminar teacher recommends Practical Classroom Procedures for Enriching Arithmetic by Herbert F. Spitzer, published by the Webster Publishing Co., St. Louis, Missouri. Some other ideas may be found in issues of the Scientific American, which has an excellent article this month (April 1963) on problem solving. Some of the specific processes we use include:

1. Number sequences - Pupils determine the function and relationship between a series of numbers and complete the blank or simply state the relationship involved.
2. Alphamatics - Our source for these was the local newspaper; the students call this their algebra. In the beginning, blanks are left in simple arithmetic problems and the children fill in the blanks by using the knowledge they have of numbers and the relationships between them. Later letters are substituted for some of the numbers. Some of the problems done by the fifth grade and most done by the sixth grade are composed of all letters. We feel the children learn the most when they develop problems for others in the group with this technique.

   In this section we start with known facts; developmentally they proceed from there. An "educated guess" may be used, but students must make certain they have first eliminated the numbers they know it can not be.
3. Mental arithmetic - A series of number processes using figures are presented. One of the persons getting the right answer makes up the next problem. It is in the construction of the problem as they give it to the class that we feel the most learning is taking place.
4. Trick problems - Sometimes the solution can be found in the wording of the problem and sometimes in the situation stated. The processes involved promote closer scrutiny and a development of understanding regarding the manner in which all manner of problems must be translated and restated in mathematical terminology before a solution may be reached mathematically. The pupils enjoy these, and frequently bring similar problems to share with the class, and occasionally, I might add, to puzzle the teacher.

Science Products and the Experimental Concept - One project a year is in the area of science. The emphasis in this area is through the use of the scientific method in problem solving, an open mindedness about results, the use of "educated guesses," as in the area of arithmetic:

1. One method is the use of a closed box into which common articles are placed. "Yes" or "no" responses are given to the questions raised. After the object has been identified, discussion centers on which questions helped identify the object, and which ones might have been asked to make identification easier. The children fix a box of their own to share with seminar members. The method is then related to other work they are doing.
2. Science fair project - Each individual explains his project to others individually. Evaluation of the project is done by the individual doing it. Merits and weaknesses are cited by the individual, and methods for overcoming deficiencies are listed for future projects. These are synthesized by some sections into a set of objectives and evaluation criteria.
3. Experimentation and observation - Experiments are set up with no explanation of what was being done or what might be expected to happen. In the beginning conditions are set up so that youngsters offer explanations of what they see, beginning with the details of setting up the experiment with appropriate equipment and then carrying through to stated conclusions. Emphasis throughout is on questioning why various elements were included or omitted, and ways the process itself may be, and under what conditions, applied to other areas. The

children begin to see that they can find answers for questions they ask themselves by following logical steps of thinking. They begin to feel that they probably learn more than if all the steps and results were "spoon fed" and explained in advance. Comparisons of the differences between inductive and deductive processes are explored.

Social Studies - Emphasizes the contributions of people from foreign lands as well as many map and chart skills. By selecting a country they wish to know more about, the students try to pin point what they believe are the relative strengths and weaknesses of the country studied. Cultural patterns and major contributions are explored. Differences between political and geographical and physical subdivisions as well as world location in relation to the progress a country has made are also investigated. Films, research processes, resource people are capitalized upon in developing oral and written presentations.

Foreign Languages - The aural-oral method is used. Simple classroom objects are named, and occasionally even arithmetic problems are worked with the foreign figures. The emphasis is on the fun and challenge of learning another language. Recordings are used so that children hear accents different from those of the teacher. While we use Spanish, we do not believe that Spanish is the language which should necessarily be taught. We know of no research which investigates the difficulty level for elementary youngsters. It merely happens to be the language that the present teacher is more proficient with, making her more comfortable working with the pupils.

Aesthetic Experiences

1. Music - Discussions follow the use of various recordings. Emphasis is placed on how and why various sequences are employed to communicate the composer's feeling. Biography is used as a supplement, and the historical period is used to set the background. A string quartet and an elementary chorus have been developed from the group.

2. Art - Exploratory work in clay sculpturing is in process. Some college work and free form mosaics have been used in the past. We hope eventually to provide a scheduled outlet of time wherein pupils may complete started projects outside of the time of the seminar itself. Emphasis in the seminar would then be placed upon discussion of the feeling produced through whatever media was used.

We are attempting to help students "capture a perception," internalize its meaning for them, experiment with the media necessary to translate the perception to a representational or communicating level, synthesize the best features of their experimentation, evaluate and cite why they believe this captures it best, then begin the project. An aesthetic evaluation and a skill evaluation follows. Both are helpful in deciding whether another media might have been better for their purposes and whether the students should express themselves and their perceptions through one media more than others because of considerable skill.

Our attempt here is to expand our own present concept of enrichment which is substantially academically oriented into one which will be providing for other types of exceptional youth.

We are discovering too that if given opportunity for expression in a variety of media there is a very sensitive thread from project to project. It is our desire to help the student find the freedom to spin the thread. We find that the perception may come directly from the observable environment, through music, or even from a film, if we don't autocratically impose a technique on a student. Pupils are discovering that they can find an outlet which isn't automated and does not need to be conforming to the demands of others. Their expression has resulted in a series of slides and several art shows in some of the nearby academic institutions and neighborhood centers.

Evaluation of the Product

It may appear to be avoiding the task at hand, but one wonders if evaluation and instruction are not an almost synonomous endeavor. If enrichment is our aim, then we should be measuring the degree of involvement and the breadth of the system of relations brought uniquely to bear on the problems within the sphere upon which they are focusing at the moment. There is no known way to evaluate depth of understanding unless we might try to measure before and after a sequence of material the level of hierarchical position of the known information. This becomes unsatisfactory because if a student has really gained depth of understanding he will distort the logical ordering of information by describing the known piece of information with systems from areas adjacent or related to the factual knowledge requested. This will "muddy" the waters, for each will describe it in terms of his own experiences and perceptions, and we are immediately returned to our autocratically and judgementally oriented system of rewards and denials.

The 1962 Yearbook of the Association for Supervision and Curriculum Development suggests that "Evaluation should be a continuous examination of immediate experience rather than a procedure used at the end of a unit of work or at a specified time" (1962, p. 249). In part it would appear as if our concepts of evaluation have grown from the convenience of the "administrative lock step," wherein segments of the school year are created to assure that parents will have some token of their child's progress through the staircase to graduation. If instruction is seen as a sequence of daily and hourly "intellectual exchanges," which are in the nature of reflections upon that which is known (Southern Regional Project, 1962, p. 67), then it follows that our evaluation processes must reflect the new nature of instructional emphasis away from fact giving and fact getting to higher levels of insight through continuing challenge. Robert B. MacLeod states that, "Thinking is a response to a challenge from the world (which includes the thinker's own constitution) which produces changes in the world which in turn produce new challenges. It is an endless spiral" (1962, p. 201).

If instructional procedure switches to an emphasis on processes and reflection, with fact getting becoming only a byproduct, we have an opportunity to squarely face our real job. Our real job in evaluation appears to be in establishing freer channels of trust and communication between the teacher and the learner so that the learner feels he "belongs," and is in on the "rules of the game." In this fashion he comes to see learning for what it is, an endless searching for truth. He becomes less expectant of the extrinsic rewards and develops greater intrinsic satisfaction from the nature and the beauty of all the materials before him and in the environment. He also becomes less ashamed of what he has produced. At present, those who get the "reward" are reinforced to do something which again will please the teacher or a parent. Those who are not rewarded simply learn not to involve themselves personally again.

In the final analysis, evaluation is a very subjective process. Objective tests of the sort we are using now simply sample certain areas and are a measure of memory retrieval. This aspect is valuable only if used as a means to assist a student to visualize and internalize sequences and systems of various types of material. This may really be helpful to him, but if we continue to place at a premium recall of an isolated fact, then acquiring knowledge and learning are just fact giving and fact getting. I'm inclined to believe that learning is a process wherein individuals are led to a discovery of new systems and operations in the world about them. Facts are drawn upon and incorporated in myriads of ways which are relative to the use to which they will be put. Viewed in this way, evaluation becomes an assessment of progress and a foundation for future insights. In this regard, evaluation may very well be our finest "aspects of enrichment."

References

American Association of School Administrators Committee on Foundations. Private philanthropy and public purposes. Study report for Atlantic City Convention, February, 1963.

Association for Supervision and Curriculum Development. Perceiving, Behaving, Becoming, Yearbook 1962. Washington, D. C: National Education Association.

Bruner, J. S. The process of education. Cambridge: Harvard University Press, 1960.

Bruner, J. S. The conditions of creativity. In H. E. Gruber, G. Terrell, M. Wertheimer (Editors), Contemporary approaches to creative thinking. New York: Atherton Press, 1962.

Coleman, J. S. Academic achievement and the structure of competition. Harvard Education Review, Vol. 29, 1959, pp. 330-352.

Coleman, J. S. The competition for adolescent energies. Phi Delta Kappan, Vol. XLII, No. 6, March 1961, pp. 231-236. (a)

Coleman, J. S. Social climates in the high schools. Washington, D. C: U. S. Department of Health, Education and Welfare, U. S. Office of Education, Monograph No. 4, 1961. (b)

Lane, J. A. Toward more productive gifted programming. In W. B. Barbe and T. M. Stephens (Editors), Attention to the gifted a decade later. Division of Special Education, The Department of Education, Ohio, 1962.

MacLeod, R. B. Retrospect and prospect. In H. E. Gruber, G. Terrell, M. Wertheimer (Editors), Contemporary approaches to creative thinking. New York: Atherton Press, 1962.

Peters, H. J. The school counselor's finest hour. National Defense Education Act Guidance Institute, College of Education, The Ohio State University.

Southern Regional Project for Education of the Gifted. The gifted student: a manual for program improvement. Southern Regional Education Board, 1962.

Wiener, Jean. The relationship between selected variables and attitudes of teachers toward gifted children. Doctoral Dissertation, University of California at Los Angeles, 1960.

Williams, C. W. Characteristics and objectives of a program for the gifted. Education for the gifted, fifty-seventh yearbook of the national society for the study of education, Part II. Chicago: University of Chicago Press, 1958.

Winefordner, D. W. Verification of possible intellectual giftedness by the use of individual intelligence tests. An unpublished report of research sponsored by the Program for Academically Gifted Youth, Division of Special Education, The Department of Education, Ohio.

James A. Lane, School Psychologist, Worthington Public Schools, Ohio

THE RELATIONSHIP OF LANGUAGE TO COGNITIVE PERFORMANCE WITH SPECIAL REFERENCE TO THE MENTALLY RETARDED

Norman A. Milgram

Like Caesar's Gaul, this paper is divided into three parts: the first part attempts to clarify two concepts that are often used interchangeably, language and cognition; the second part shows that assessment of cognitive development or intellectual functioning by verbal means may confound the parameter being measured with the method of measurement; the third part argues that teaching methods which place excessive, if not exclusive, reliance on verbal demonstration and instruction by the teacher and verbal response by the learner unduly penalize younger children, children with different kinds of language handicap, and mentally retarded children.

There are any number of reasons for the ubiquitous confusion or equation of cognition with aural-oral language (it should be noted that for the purposes of this discussion language is defined merely as spoken and heard verbal communication):

1. From a phylogenetic point of view, the major difference between man and dumb animals is linguistic behavior; hence, the tendency to equate language with reason.

2. From an ontogenetic point of view, we observe little cognitive behavior as we customarily think of it in the young child until the advent of speech and the understanding of speech. Admittedly, Piaget has demonstrated a great deal of cognitive activity during the sensori-motor stage, but we tend, nevertheless, to regard as uniquely cognitive in humans the adaptive and problem solving behavior that accompanies and follows the comprehension of speech and the acquisition of speech.

3. From an empiricist point of view, most people assume that the contents of reason, the materials which are cognitively manipulated, what Piaget refers to as cognitive aliment, are verbally communicated and subsequently internalized. Some claim that not merely cognitive aliment, but the very tools and techniques for digesting this aliment are developed linguistically. Benjamin Whorf wrote that higher levels of thinking are dependent on language with the structure of language influencing the manner in which one organizes and understands his environment; within that framework the probability that an individual would develop a given concept depends on the number of available words bearing on that concept. Some recent experimental work by Griffith and Spitz with mentally retarded children has been interpreted as showing that unavailability of a verbal association common to separate instances of a given concept decreased the probability of producing this term when asked to verbalize the concept under which the separate instances are grouped.

4. From an introspective point of view, whenever we attempt to reflect upon our cognitive processes and to report our cognitive operations and experiences, we customarily fall back upon words. In a state of reflection we often employ inner speech and when we unknowingly vocalize this inner speech we create an embarassing situation to ourselves and our listeners.

5. Finally, from a scientific-theoretical point of view, words are a convenient unit of analysis and an operationally clean way of representing internal cognitive events or processes; hence, also the widespread usage of verbal mediating responses in the theoretical formulations of behaviorist psychologists. The bias -- both popular and scientific -- to freely infer verbal mediating responses has gone so far that the notion of a genuinely cognitive task being essentially nonverbal is unacceptable, if not incomprehensible, in some quarters.

In arguing for a distinction between aural-oral language and cognition, I do not minimize the far reaching implications of language communications for providing information, enhancing cue distinctiveness in discrimination learning, providing stimulus generalization via verbal mediation, creating verbal formulas and mnemonic devices that facilitate problem solving in a wide variety of situations. But, despite its widespread repurcussions on the human species, language is not coterminous with the gamut of cognitive activities and performances which people exhibit. Perhaps, this point of view which has been continually stressed by my colleague, Dr. Hans Furth, with respect to deaf and aphasic children will become clearer when compared and contrasted with the prevalent view about these language handicapped children.

The view held by the majority of parents and educators in the field of deafness assumes that the linguistic channel is essential for cognitive development and intellectual functioning; that all other considerations in training and educating these children must be subordinated to the major goal of achieving verbal communication by whatever means available - hearing aids, lip reading, and meticulous instruction and practice in speaking; that without verbal communication deaf children are to all intents and purposes hopelessly mentally defective. Some authorities have stated that language deficiency in deaf children results in decreased conceptual and abstractive abilities. Proof of the pudding: deaf children score lower than hearing children on IQ and achievement tests and increasingly so the more deficient they are in verbal communication.

By contrast, Dr. Furth who has done extensive experimental work with deaf children and adults sees the entire problem in a different light. He first states the rather surprising thesis that a child could develop adequate cognitive functioning even if he remained entirely nonverbal throughout life; that communication between the child and the environment is indeed essential but that verbal communication is not the only available or the only satisfactory means of communication. It certainly remains the channel of choice for hearing persons of normal intelligence, but as will be developed later in this paper, its exclusive utilization may be detrimental for learning and problem solving. Language is not, however, the channel of choice for deaf and aphasic children. For these children nonverbal communication is desirable, if not essential, for cognitive aliment to be provided the growing child. Unfortunately, gestures and signing, one mode of nonverbal communication, is severely discouraged by many leading authorities in the field for use by deaf children and their parents. The result: while hearing children are literally incorporating a heavy diet of discriminations and generalizations, events and their relationships by the aural-oral channel, the deaf child is severely malnourished, especially during the preschool years when there is little formal effort at verbal communication and even during the school years when his 4-6 hours of verbal training in the classroom are matched against the 14-16 waking hours of formal and informal verbal training for the hearing child. In this situation it is not surprising to learn that deaf children score lower on IQ tests and achievement batteries that are verbally loaded, are often posed in verbal terms which must be decoded before a cognitive operation can occur and that require translating the answer into words as evidence that the cognitive operation was correct. Furth has shown that when verbal elements in a cognitive task are reduced, deaf children do correspondingly better. His conclusion: verbal training should not be ignored in the education of the deaf child, but nonverbal training and communication should be systematically introduced in the preschool as well as the school years of these children. He has pleaded for more extensive training in nonverbal communication during the early years so that the deaf child's cognitive diet will be more adequate.

Evidence in support of this view comes from a number of sources. Recent emphasis on the discovery of relations or the discovery of principle of solution as a means of stamping in the desired cognitive operation indicates that it is not enough simply to teach rote verbal formulas. Wertheimer, Vygotsky and others have inveighed against the excessive recourse to overly practiced verbalisms or pseudoconcepts without so structuring the learning situation that the learner comprehends the cognitive referent for the verbal demonstration. Increasing attention is being given to nonverbal as well as verbal demonstration in training children in cognitive operations. The resurgence of interest in the Montessori method, experimental efforts to educate young children in academic skills usually taught at a later age, the learning principles being built into teaching machines, Suchman's efforts to teach students to apply the scientific method of inquiry in understanding physical causality -- all of these efforts attest to the necessity of explicitly teaching cognitive operations and of avoiding excessive reliance on the verbal channel in the teaching process.

What does this emphasis on nonverbal cognitive training have to do with mentally retarded children who have normal hearing and are presumably retarded in all spheres of cognitive development? It is my view and that of other investigators that mentally retarded children are especially deficient in learning via verbal channels and to a degree above and beyond that to which they are retarded in other spheres. Numerous studies have shown that retarded children demonstrate a marked deficiency when administered tasks couched in verbal terms and/or requiring a verbal response. This deficiency is striking when contrasted with their somewhat better performance level in nonverbal cognitive tasks. Whatever implications were drawn above as to the confounding of mental deficiency and language deficiency with deaf children of normal intelligence can also be applied to hearing children of retarded intelligence.

A. Luria of the USSR and other Russian psychologists have argued that retarded persons are deficient in the integration of first and second signal systems and, more specific to the present discussion, are deficient in the integration of verbal and nonverbal cognitive processes. O'Connor and Hermelin in England have interpreted their experimental findings in a similar manner. Reese in a recent issue of the Psychological Bulletin cited the experimental and theoretical evidence in support of the verbal mediation deficiency hypothesis in young children of normal intelligence; with increasing age, this deficiency presumably dissipates. Luria, O'Connor and others would argue that the verbal mediation deficiency persists in the retarded child to a greater degree than one might predict from his nonverbal cognitive performance.

Some experimental confirmation of this view may be seen in my collaborative research with Dr. Furth. He found that deaf children at various age levels performed as well as hearing controls in solving nonverbal tasks based on discovering the concepts of sameness and symmetry; these concepts were depicted in separate series of geometrical shapes with the correct choice reinforced over a number of presentations until criterion for successive discovery of principle of solution was reached. By contrast, on a third task requiring the discovery of opposite (big-little with transfer to long-short, up-down, dark color-light color, soft texture-rough texture), the deaf were significantly poorer. This discrepancy was predicted in advance on the assumption that the concepts of sameness and symmetry were not particularly facilitated by daily language usage. The concept of opposite profitted, however, from the frequent juxtaposition of opposite terms in ordinary speech (e.g., rich-poor, big-little, hot-cold) with the result that children saturated in a verbal milieu are more likely to recognize this concept in a discovery task than children growing up in a milieu less verbally saturated.

This study was recently replicated with educable mentally retarded children and normal controls of comparable mental age (based on Stanford-Binet), and the results were identical. The retarded were poorer than MA controls only on the opposition or language-relevant task. Our most recent study investigated conceptual classificatory performance in retarded children as a function of verbal elements in the decoding and encoding stages of the conceptual task. The experimental task was classification of exemplars of a given category either by verbal response (saying the conceptual term) or by nonverbal response (pointing out the correct instances of a concept from among multiple-choice alternatives of the concept and competing, erroneous groupings). At the decoding stage, verbal versus nonverbal stimuli were compared by offering pictures versus their word referents to independent experimental and control groups. Results showed that when verbal elements were minimized in the decoding and encoding stages, mentally retarded children with MA 6 and 9 did as well as normal controls. As verbal stimuli were added to input or decoding, retarded groups showed correspondingly greater difficulty in manipulating the verbal input. Moreover, as verbal elements were added to output or encoding, the retarded fell behind the normal controls as a functioning of increased MA with further evidence supporting the continued refinement of verbal formulation in conceptual response through age fifteen. The experimental paradigm and all obtained results were such as to account for the observed conceptual performance of retarded persons without invoking deficiency in the cognitive classificatory operation, but rather deficiency in handling verbal elements which are logically and operationally distinguishable from the intermediate cognitive operation.

A major implication of this study and a point being stressed in the present paper is that failure to control for verbal factors in assessing cognitive performance both in deaf children and in hearing mentally retarded children is likely to result in significant underestimation of intellectual potential. There has been much discussion in recent years about culture-free or culture-fair tests devised to avoid penalizing lower socio-economic classes within our society or groups in other societies and cultures. The same rationale might well be applied to tests of cognitive performance in deaf and retarded children; these measures should be language-fair or language-free. To the extent that we are unable to assess a given cognitive behavior except by verbal means -- let us be fully cognizant that the resulting performance may tell us more about their ability to handle verbal factors than about their ability to perform cognitive operations.

In summary, the attempt to logically, theoretically and operationally distinguish between verbal factors in the input and output stages of a cognitive task and the cognitive operation required for solving the given problem appears justified. In our view, the confusion of language and thought and the resulting excessive reliance on verbal factors in cognitive assessment and in education and training have undesirable consequences not merely for working with the deaf or mentally retarded child, but also for working with normal children as well. These consequences are, perhaps, more striking in the language handicapped groups, but even normal children especially when young find it difficult to grasp the cognitive referent behind verbal curtain. In closing I find that the chairman of this symposium, Dr. Paul Benoit, voiced somewhat similar sentiments in December 1962 issue of the Education Reporter of the American Association on Mental Deficiency, when he stated in an article entitled Experiential vs Symbolic Teaching, that "it seems fruitful to visualize the retarded child as one who must expand his skills directly through experience and not just through speech."

Norman A. Milgram, Associate Professor
of Psychology, Catholic University of America,
Washington, D. C.

THE TRAINABLE MENTALLY RETARDED IN THE DAY SCHOOL: GOALS FOR THE TEENS AND THEREAFTER

Morton Morris

Public agencies responsible for training programs are acknowledging officially the need to formulate goals for older trainable pupils. In Pennsylvania, for example, a statement on this issue is included in a recent bulletin on "Standards for the Organization and Administration of Special Service Programs for Exceptional Children" (1962). With reference to the program for full-time classes, the statement specifies that, "The training program shall be directed toward the goal of self-care and adjustment to social situations, acceptable habits of work, physical coordinations, sense perceptions, and adequate skills in communication. Among older trainable pupils, due consideration should be given to developing social and prevocational skills which are applicable to post-school adjustments in the home or neighborhood, in sheltered workshops or residential situations, or in other supervised living plans." This statement recognizes the necessity for providing useful, long range goals for many pupils who have grown into their teens and are developed socially, emotionally, and physically to such a degree as to be ready for prevocational training.

If we examine enrollment figures, the need for new goals becomes more apparent for those who qualify and have outgrown present programs for trainable children. Pennsylvania school census reports for April, 1960, indicated a state-wide enrollment of 2,797 pupils. Chronologically, pupils ranged from 5 years 7 months up to 21 years of age. Approximately 886 pupils, or 31.9 per cent, were 13 years of age or older. Those 15 years of age and older numbered 435 pupils, or 15.7 per cent, of the total enrollment. Thus, the presence of significant numbers of teenage trainable pupils in the public school draws attention to new goals and curriculum content for this group -- preferably for those 15 years of age and older.

In planning the content of a curriculum, several assumptions should be considered as guideposts. First, it is difficult to generalize a problem like mental retardation. There are many factors which affect the family situation and the community in which the retarded lives and his prevailing economic situation. The program designed for one community will not necessarily be applicable to another. Second, the limited number of follow-up studies, such as the Saenger Report (1957) on "The Adjustment of Severely Retarded Adults in the Community," suggest that large numbers of trainable pupils will remain in the community upon termination of day school. A third assumption to consider is that the majority of trainable children will need some supervision throughout their lives.

Keeping in mind the general assumptions outlined above, let us turn our attention toward developing specific training programs. One possibility focuses major attention upon school training for home living and for prevocational or workshop experiences. In each situation, the major goal is to encourage greater independence and self-reliance. To develop a practical curriculum, however, we should analyze in detail some specific skill requirements. These pertain to getting along in daily situations which are oriented to household activities and pre-sheltered workshop experiences. Once these skills are delineated, they can be developed early in the teenage curriculum in order to promote good work habits, self-reliance, responsibility to job assignments, and other fundamental goals.

Ruoff (1962), MacLeech (1961), and others point out a number of pre-workshop training needs which involve matters of travel, safety, dress, cooperation, time schedules, property rights, care and use of materials, personal habits and manners, and simple manual skills. Many young people who come to a workshop setting do not know how to follow a work routine or how to do simple tasks such as drying dishes, folding a letter, or wringing out a cloth used for cleaning. The reasons lie more often in lack of opportunity for learning these skills rather than in incompetency. Consequently, one of the joint responsibilities of school and home training is to provide these opportunities. Pre-workshop training should help pupils to travel to and from a workshop, to practice traffic safety, to wear proper clothing, and to choose appropriate color combinations so as to avoid bizarreness in public. Time concepts should be stressed also in relation to reporting to a workshop and in following a schedule without constant reminding. Good manners should be stressed similarly, especially in knowing when to speak, what to say, and how to react to visitors. Among the simple manual skills, pre-workshop training should develop the ability to fold, staple, paste neatly, wrap and package, select things according to size and color, and to use a hammer and other simple tools properly. Some assembly line experiences should be initiated as practice for workshop routine.

Let us consider how prevocational skills may be taught concretely by reference to a pilot program in the Westmoreland County Public Schools under the immediate direction of Mrs. Joan M. Glasgow, Supervisor of Special Classes.

A morning pre-workshop schedule is utilized for two classes of older trainable pupils, housed in a school center for the mentally and physically handicapped. Pupils are grouped for instruction into high and low ability levels. Specific skills are introduced and performed on a time schedule. Each trainee is permitted to learn all phases of the skill at different times. For example, one morning is scheduled for developing skills such as cursive writing of name and address and recognition of money concepts in relation to a dime, a quarter, a half-dollar, a dollar, and five dollars. Other arithmetical concepts introduced during the week include temperature, use of the oven meter, and telling time to the hour and half hour. Good manners are taught in relation to using a telephone, making an introduction, and meeting a stranger.

Protective vocabulary is introduced on the assumption that what the trainable pupil reads will be for his functional and protective needs and will consist primarily of the signs, labels, and directions he will encounter in his daily contacts with home, school, and neighborhood. He will learn by perceptual or word recognition methods when the need arises for doing so. However, few will ever be able to "read" in the complete sense of the word. If pupils can master either "picture reading" or "word reading" they will gain capacity for greater independence which will better enable them to get along. "Picture reading" refers to the ability to recognize socially important pictures -- those on bulletin boards, charts, labels, food containers, ads, as well as signs such as bus stops and directional arrows. Obviously, this power of "picture reading" can be useful for getting about the community, for shopping, and for reasons of safety. "Word reading" means recognizing and understanding individual or small groups of words used primarily for identification or directions. A child capable of word reading will be able to recognize his first and last name, names of his family members, and some common words for information and safety such as "Exit," "Men," "Women," "Watch Your Step," "Danger," and so forth. Protective vocabulary may be appropriate to activities in the home, school, church, shopping center, playground, or park and to travel by public conveyances.

Home making skills are taught to each group by a graduate home economist. Skills taught during a weekly schedule include washing, ironing, measuring, dusting, waxing, sweeping, and sewing. Other subjects include grooming, color combinations, and manners.

The trainees are grouped on an ability basis, and their performance is judged according to ability to follow directions, manipulative skills, speed of performance, thoroughness of performance, retention of skills, and degree of frustration experienced when a time limit is involved.

The higher ability group is exposed to assembly line craft skills under periodic instruction by other teachers of the retarded who share responsiblity in the pilot program. Through the method of assembly line projects in craft work, pupils learn to associate with several instructors, contribute to a project, belong to a working team, and to derive a sense of accomplishment at each step in the assembly line method of completing a project. Craft skills involved in such a project may include sanding, drilling, assembling, and varnishing. After skills are learned, a subsequent step in assembly line experience will be to raise standards by setting time limits for completion of a project.

In order to promote greater independence and self-reliance, parents, teachers, and teacher-aides become increasingly aware of what NOT to do for the older trainable pupil. For example, rest periods appropriate to younger children are discontinued. Pupils are encouraged also to go to the bathroom as individuals and as required. The home is counseled so as to encourage mothers to permit greater self-reliance and to set standards in parallel fashion.

In summary, goals for the teenage trainable pupils are oriented toward pre-sheltered workshop and home living experiences. The focus of activities is upon household activities, manual skills, adjustment to supervised and assembly line project work, habits of safety and personal grooming, protective vocabulary, and broadened social experiences. Our general responsibility is to provide a well organized program, utilizing highly adequate teaching methods geared to the development of social competency for trainables under supervised living arrangements. Needless to say, close liaison should be maintained between school and the community sheltered workshop. Teacher visitations can be mutually profitable for both agencies.

One final school responsibility should be mentioned. Wherever possible, the school administration should lend encouragement and support to research efforts in the area of mental retardation. The scope and complexity of the problem requires that all agencies responsible for the mentally retarded do their utmost to cooperate in research projects.

Sample Morning Schedule for Prevocational Training

Group A

Monday:
1. Writing (cursive - name and address)
2. Money concepts

Tuesday:
1. Safety
    - In stapling
    - In using scissors
    - In using step ladder
2. Street crossing

Wednesday:
1. Cleanliness
    - Grooming
2. Color combinations of clothing
3. Manners

Thursday:
1. Telling time
    - To the hour
    - To the half hour
2. Folding and packaging
3. Pasting
4. Stamping

Friday:
1. Cleaning
    - Dusting
    - Washing
    - Waxing
    - Polishing
    - Sweeping

Group B

Monday:
1. Washing
2. Safety
3. Waxing

Tuesday:
1. Dusting
2. Measuring
3. Sizes

Thursday:
1. Ironing
2. Shapes
3. Sweeping

Other Subjects:
1. Colors
2. Folding
3. Grooming
4. Manners
5. Clothing
6. Cooking
7. Sewing
8. Folk dancing
9. Coordination

PROTECTIVE VOCABULARY

for

Home - School - Church

- Do not put in mouth:
  - pins
  - medicines
  - bleaches
  - ammonia
  - *Poison
- Hold railing when walking on stairs.
- Pick up toys.
- Don't play with matches or with fire.
- Do not run. Walk.
- Use dry hands when putting plug in or out of electrical outlet.
- Don't play near cars.
- Use a pot holder on a hot pan.
- Wear an apron when cooking.
- Wear a thimble when sewing.
- Be Quiet*
- Cold* (water taps)
- Hot* (water taps)
- On*
- Off*
- Do not touch: (Wet Paint)* (Hot Stove)*
- Exit*
- Be careful with sharp instruments.

Outdoor Fun Time

- Stay inside boundary lines.
- Wait your turn.
- Stand back.
- Hold on with both hands.
- Look up when running.
- Walk around children who are playing a game.
- Take aim (playing ball, horseshoe, etc.)
- Private. Stay out (or Keep out*).
- Stay off grass (or Keep off grass*).
- Do not feed.*
- Keep hands off cages.*
- Don't stand up* (On amusement rides)
- Don't push. Wait in line.
- Danger*
- Don't touch poison-ivy.
- Stay with the others.
- Do not kick.

Traveling

- Stop*
- Go*
- Wait*
- Walk*
- Bus Stop*
- Railroad Crossing*
- Private*
- Pull cord to stop.*
- Drop money here.*
- Keep hands inside windows.*
- Watch your step.*
- Do not talk with driver.*
- In*
- Out*
- Do not push.
- Wait your turn.
- Look both ways.
- Sit down.
- Be quiet.
- Cross the street at street corners.

Going Shopping

- Hold to railing on stairs.*
- In*
- Out*
- Ladies (or Women*)
- Men*
- Private*
- Rest Rooms*
- Don't play near cars.
- Look both ways.
- Don't touch things.
- Quiet
- Do not run.

---

* Written Vocabulary

References

Department of Public Instruction, Commonwealth of Pennsylvania. Standards for the organization and administration of special service programs for exceptional children, 1962.

MacLeech, B. Vocational habilitation for the mentally retarded. The International Education Reporter of the American Association of Mental Deficiency, 1961, Vol. 1, No. 3.

Ruoff, A. Pre-workshop training needs. Paper read at Pennsylvania Federation Annual, Council for Exceptional Children, Bedford, October, 1962.

Saenger, G. The adjustment of severely retarded adults in the community. Report to the New York State Interdepartmental Health Resources Board, Albany, 1957.

Morton Morris, Supervisor of Special
Education, Westmoreland County Public
Schools, Greensburg, Pennsylvania

RESEARCH PROVIDES THE QUESTIONS

James W. Moss

We ordinarily do research because we want to find answers. A good research project, however, will generate many more questions than it can possibly answer. Research generally provides a setting in which we can observe children under more-or-less controlled conditions. A competent researcher, working with his eyes open, will see many things which he had not set out to look for, and the data he gets will often be puzzling and defy interpretation.

For the past four years, we at the University of Illinois have been studying the effects of special class placement on the development of mentally retarded children. Many questions have sifted to the surface during these four years. I have tried to pull together the most pertinent of these questions for presentation. It is my opinion that these will be the most important questions facing educators of retarded children for the next decade.

First. Although I do not have the final results from our own study, the answer to the efficacy question has been available to us for some time. Our study will only substantiate the previous data and perhaps add the missing links. When you consider the results of any of the previous special class projects, you will find that there were essentially no differences between the groups. You will also find, however, that there was quite a spread of scores around the means with some special class students doing well and others doing poorly. Likewise, you would find some retarded children doing well in regular classes and some doing poorly. It is quite obvious that there are differences between retarded children and that they will perform differently under different educational environments. We have made the mistake in assuming that all retarded children were alike and in not asking why some children succeeded while others failed.

From our results to date, it appears that retarded children may be classified into three groups as far as school placement is concerned: (a) those who will succeed in a regular class, (b) those who will fail in a regular class but succeed in a special class, and (c) those who will fail in even the best of special classes. We have no way now of determining early which children will fall into which of these groups.

Question: How can we differentiate at an early age between retarded children who must have special class facilities in order to succeed and those children who will fail under any present program?

Second. As mentioned previously, there are some children who will fail under any known condition. This is certainly not a new or unexpected finding. In every special class you can find one or two children who are performing far below their expected level. We carry these children along from year to year doing very little if anything for them. Inasmuch as these children do not profit from special class placement, they do not belong there any more than a blind or deaf child. Certainly, they are better off there than in the regular class, but we cannot justify moving children from one nonlearning situation to another just because we have labeled them retarded. We are in the business of educating children, not just watching them grow. It is quite apparent that these children need a different type of program than presently is being offered in special classes.

Question: What kind of a program do we need for these nonlearning retarded children. What kinds of facilities, what kind of teacher preparation, what ancillary services?

Third. Many mentally retarded children seem to do quite well when left in regular classes while others fail. Instead of concentrating all of our attention on the development of special facilities, some effort would well be spent in attempting to find out how the regular classes can be modified to permit more retarded children to profit from them. We need to know more about the nature of the classes which permit some children to succeed. Perhaps some modification in the regular class program could make a big difference in the number of special classes needed.

Question: What modifications could be made in regular classes which would permit more retarded children to profit from them without suffering negative side effects?

Fourth. There is some indication from our work that mentally retarded children with better memories do better in school. Memory certainly played a factor in determining which regular class children were promoted and which were retained at the first grade level. Because we did not set out to measure this variable directly, we have no data bearing directly upon it. There is apparently some relationship, however, between achievement, intelligence, and memory. The one thing which most characterized the retarded child to the teacher is the child's ability to learn something one day and forget it by the next. We tend to accept this lack of memory as characteristic of retarded children, and yet some retarded children have fairly good memories for some things.

Question: Just what is the role of memory in intelligence and achievement, and what can we do about it? Can we train memory, and what would be the result if we did?

Fifth. One of the principal reasons for placing children in special classes is to save them from the devastating effects of constant failure in the regular grades. I have to ask "What failure?" We attempted to observe this failure in action and could not find it. With the admittedly few observations we made, we found that most teachers were quite aware of the limitations of their slow children -- enough so that the very retarded were frequently given no challenge at all but rather permitted to wander about or otherwise keep themselves unobtrusively engaged.

Have we generalized from a few obvious cases to reach the conclusion that failure is a natural consequence of regular class placement? Or is failure really a factor at all? How about the slow learner who is also at the bottom of most classes? Shouldn't we expect to find more cases of social-psychological difficulties here where there is even a greater discrepancy between teacher expectation and child achievement?

Question: Where is this failure we talk about all the time? Why doesn't it affect the slow learner more than the mentally retarded, and how much of what we attribute to failure is really the result of permitting a child to wander about "unobtrusively engaged?"

Sixth. Normal, regular class children have report cards and promotions to worry about. They have to be concerned with peer pressures and parental pressures. What do special class children have to worry about? Special class children are in a setting where there are no report cards of any merit, no promotion, and no significant peer competition. The well trained special class teacher is sympathetic, understanding and nonthreatening. In many instances, the parent of the special class child couldn't care less about the academic progress of his child.

Question: Just how do we motivate the special class child? With gold stars and teacher smiles? What goals are held up to the special class child, and what must we do to make it important for him to reach these goals?

Seventh. An odd thing happens when you ask retarded children difficult questions. They answer them. If you ask them who won the ball game yesterday, they are just as likely to answer George Washington or Babe Ruth as anything else. If you ask them what President Kennedy's telephone number is, they may give you a telephone number in response. It is the rare child who will question the question or admit that he might not know the answer. The answer to such a question may or may not be remotely related to the question. What has happened to these children? Have they learned that the act of answering is all that is important and that "correctness" of response makes no difference? Don't we place any value on accuracy and correctness any more?

Question: How do we develop a better balance between answering for the sake of answering and accuracy of answer? Or, how do we develop self-criticism in these children?

Eighth. The pirates used to sing about "15 men on a dead man's chest." Now we have "15 kids in a special class," and there's no telling who made up the numbers in either case or why. The maximum number allowed in special classes varies from state to state (Maybe retarded children vary from state to state.), but the number is always arbitrary. And more often than not the maximum becomes the minimum. There has been no research, nor is there likely to be, to determine how many children should be placed in a class. The purpose of the maximum is to provide a setting where the teacher can provide time for more individual work with the children, but no teacher can run a strictly individualized program. The restriction of class size provides for smaller groups, but how about the number of groups with which a teacher has to deal? I suspect that the average EMH teacher actually deals with more groups than the regular class teacher. We attempt to create a more homogeneous group when we put retarded children into a special class, but do we? The average special class will have a 3 or 4 year age-span with IQs ranging from 50 to 75 and with no other meaningful restrictions. This means that an intermediate special class with children ranging in C. A. from 10 to 14 could have a mental age span from 5 to 10 years with a couple of children at the nonlearner level. The possible mental age range is then at least six years, and grade placement is extremely varied. The average fourth grade class will have only about a four year MA range because CA is held relatively constant, and the very slow child has been retained a year to bring his MA more in line with his grade. I'm not sure, but I suspect that there is more heterogeneity in a special class for mentally retarded children than one finds in most regular classes.

Question: Have we created homogeneous grouping with our special classes, or does the addition of extra reading groups, etc., actually create more of a problem than the reduced number of pupils is able to offset? Once we stop considering all retarded children as essentially the same, more attention needs to be paid to the question of how many of what kinds of children should be in a special class. Would you put 15 nonlearners in one class, or should there be less where more individual attention is needed? What about classes with predominately brain-injured children? The whole question of the constitution of these classes must be closely examined as to the number and type of child.

Ninth. There are other questions which suggest themselves but which I think to be of less importance right now than those already mentioned. We need to study the development of personality in retarded children as a function of the type of educational program to which they are exposed. We need to know much more about the effect of home background, particularly during the preschool years. The whole question of preschool educational programs is important and is now receiving much attention in various major cities. The problem of promotion versus retention for the retarded child remaining in the regular class needs examination.

One indication of growth in any field is the developing sophistication of the questions investigated. We have been asking the same questions for 30 years. I have attempted to raise some new questions which must be answered if we are going to develop programs for the mentally retarded which are truly "special." The answering of these questions will be difficult, expensive, and time consuming. I'd like to conclude by saying a little about how the research should be done.

First, it is about time to become serious about our research. We are no longer concerned with small, insignificant problems which can be dealt with on a part-time basis when other obligations permit. If we are going to answer the questions I am raising, we are going to have to develop a new attitude about research.

When a principal investigator is devoting one-fourth of his time to a research project and three-fourths of his time to other duties, the research must always be a compromise and be "fitted in" where practical. I would suggest that if a project is not worth someone's full attention, then it isn't worth starting. To get the most out of a research project a man has to live with it, not visit it!

As a rule we use research money to help support graduate assistants in our universities. We will frequently find research conducted with two or more half-time student assistants doing much of the work. Again this means a compromise between class schedules, final examinations, dissertations, and other obligations. This might be an excellent way to finance students through college, but it is a very poor way to conduct serious research. One full-time research assistant can accomplish more than two or three half-time graduate assistants and do a better job of it. I can see no justification for a serious research project having more than one regular part-time employee.

In order to conduct the research that is needed for the mentally retarded, we need full-time project directors who can sit and stare at data and children for hours and full-time research assistants whose only obligation is to carry out the project work. When we decide to do research in this way, we will then be able to answer some of the questions which I am raising.

James W. Moss, Assistant Professor,
University of Illinois, Urbana

PEABODY COLLEGE RESEARCH ON THE ILLINOIS TEST OF PSYCHOLINGUISTIC ABILITIES

Max W. Mueller

The ITPA was introduced to the special education department at Peabody College in the spring of 1962 by Dr. James Smith, now of San Fernando Valley State College. Since that time we have carried out several exploratory studies using the ITPA. It is the purpose of this paper to review the four studies completed to date using the ITPA, to point out some future research that we feel is needed, and to discuss some of the problems we have encountered in using the ITPA.

Research Summary

Study Number One: The earliest use of the ITPA at Peabody was in a dissertation study by Dr. James Smith in 1962. The primary purpose of this study was to evaluate the effects of a group language development program with small groups of EMR children. The ITPA was chosen as the instrument best suited to measure the growth of language abilities over the period of the study. ITPA scores were first obtained for approximately 50 subjects enrolled in special classes for EMRs in the Nashville, Tennessee, and Davidson County, Tennessee, public schools. From this pool of subjects, experimental and control groups of 16 subjects each were established. Subjects were selected in pairs matched for chronological age and language age as measured by the ITPA. The experimental group was then divided into two groups of eight subjects and given the experimental treatment. This treatment consisted of a series of 45 minutes lessons, three days a week, for a period of eleven weeks. The lessons were designed to stimulate the subjects in the use of various language skills through the use of pictures, games, songs, and many other techniques. Though the lessons were developed from a theoretical framework similar to that underlying the ITPA, care was taken that none of the actual content of the lessons was identical with that of the test. At the end of this period of training all subjects were retested, again using the ITPA. Comparison of difference scores between pre- and posttest scores for the two groups indicated that the experimental group had made significantly greater gains for the period than the control group.

Study Number Two: One of the questions raised by the Smith study concerned the permanence of the gains exhibited by the experimental group. In an effort to determine whether these gains were relatively stable, all of the subjects of the Smith study who could be located at the end of one year were again retested by Mueller and Smith. Results of this follow-up testing indicated that the experimental group still showed a strong tendency to surpass the control subjects in total language age as measured by the ITPA, but that this difference was not significant at the .05 level of confidence. Comparison of the means of the two groups yielded a $\underline{t}$ value with an associated probability of less than .10.

Study Number Three: In a recently completed study, Mueller and Weaver compared the language abilities of TMR children in day schools and institutions on the basis of ITPA scores and a speech rating scale. This study utilized 40 pairs of subjects matched for sex, race, IQ, and chronological age. The most startling finding was that the institutionalized subjects scored higher on total language age, on all subtests of the ITPA, and on the speech scale. Since this finding was directly opposed to the principal hypothesis of the authors, considerable effort was expended in trying to account for it, but it was impossible to draw any firm conclusions. The authors observed that the institutional group tended to be more enthusiastic during the testing sessions and concluded that the unusual results may have been the result of their greater involvement in the testing situation. This is consistent with the theory advanced by Zigler to account for comparatively good performances by retardates in other experiments. It also is possible that the difference may have resulted from a greater emphasis on language in the classes at the institution than in those in the day schools, but this must be viewed as somewhat unlikely, considering the results of Hudson's study of TMR day school classes. Finally, it must be recognized that the differences may have occurred simply through the operation of chance, but this too seems somewhat unlikely, as in this case that would involve only five chances in a thousand. In any event, the marked superiority of non-institutionalized retardates observed in so many studies of various functions did not appear in these groups.

Other findings in this study were that TMRs language age as measured by the ITPA was significantly lower than mental age derived from the Stanford-Binet; that scores on tests involving visual and motor channels of communication tended to be higher than scores on tests utilizing the auditory and vocal channels; and that ITPA language age correlated higher with mental age than with rating of speech fluency. These findings are generally consistent with results of earlier research in this area.

Study Number Four: The study most directly related to the ITPA was that carried out by Semmel and Mueller. ITPA scores of 118 mentally retarded subjects ranging in age from 7 to 19 and in IQ from 20 to 80 were submitted to factor analysis. The analysis was carried out by IBM 650 computor using a centroid solution and a quartimax rotation. The raw factor solution yielded a strong general factor on which the various subtests loaded from .60 to .82. This was interpreted as supporting the factor validity of the test and indicating that the derivation of a total language age score from the sum of subtest scores is legitimate. Rotation of the obtained factors brought out strong loadings of each subtest on an independent factor, which was interpreted as indicating a high degree of uniqueness in each subtest. Only one subtest (auditory-vocal association) exhibited any appreciable common variance in the rotated factor solution. It had been hoped that the factor analysis might suggest possiblities for obtaining a global language age score from the administration of fewer subtests, but the high loadings of each subtest on a different factor suggest that all subtests are necessary. Further, it was noted that MA correlated as highly with total LA as did most of the subtests. In general, it was concluded that the test exhibits a high degree of factor validity, and that the structure of the test as empirically determined closely approximates the structure posited by the test authors on theoretical grounds. However, the independence of LA scores from MA remains in question.

Implications for the ITPA

Based on the results of these four studies, it seems reasonable to draw some conclusions regarding the ITPA. Five examiners have been involved in the collection of data for our investigations, and about a dozen other examiners have been trained in the use of the test. We have found that a person with experience in the administration of individual intelligence tests can pick up the ITPA administration with little difficulty. Approximately half a dozen administrations were found to be sufficient to develop competence with the test. Several persons without previous experience in individual testing have also been trained. Our experience has been that the test is relatively difficult to learn without previous testing experience. Early in our testing program for the Smith study, we also had examiners rescore test protocols of other examiners. In all cases interscorer agreement was virtually perfect. This was interpreted as indicating that scoring is objective and that the manual of the test is adequate in its presentation of scoring criteria. Several examiners also observed that the testing situation gave one the opportunity to draw inferences about the subject's abilities beyond the scores derived from the test, suggesting that the clinical utility of the ITPA may go beyond obtaining numerical scores indicating level of language functioning. As a result of our experience with the training of examiners and the observation of subjects in the testing situation, we would suggest that the ITPA falls within category C of the classification system of the American Psychological Association.

In both the Smith study and the Mueller and Smith study, the ITPA was administered to the same groups of subjects over a period of one year. This design allowed us to calculate the test-retest reliability of the ITPA. We recognize that it is dangerous to draw conclusions concerning reliability from data on so few subjects, but it does seem appropriate to report such data. Since the experimental group recieived special treatment in the interval between tests, it also seemed necessary to use only the scores of control subjects in investigating reliability. Correlation of pre- and posttest scores for the 16 subjects in the control group with an intertest interval of three months yielded a coefficient of .82. Mueller and Smith also investigated the reliability of ITPA scores over a period of approximately one year. Scores were available for 13 control subjects over this period. Over the one year period the average increase in LA was 6.62 months with a standard deviation of 1.7 months. In view of the intelligence level of the subjects involved, and the level of language development suggested by scores on the first test, these results attest to a high degree of reliability. This reliability is also reflected in the obtained correlation of .94 between pretest and follow-up scores. We were unable to explain why reliability over a period of one year appeared to be higher than over a period of three months.

Since our interest at Peabody is more in the area of language training than in assessment, we are particularly interested in having an instrument which is very sensitive to changes in language functioning. Results of the Smith study suggest that the ITPA certainly qualifies as a sensitive instrument.

When we first began to use the ITPA at Peabody, two questions came up concerning the utility of the test. We questioned the usefulness of the test on the basis of the low ceiling and the estimated administration time of one hour. Our experience with the test has led to our satisfaction concerning these questions. First, we have used the ITPA with retardates up to the age of 19 years. Our impressions have been that the test is adequate for older retardates up to a maximum mental age of about ten years, which considerably extends the range of usefulness of the test. However, our experience indicates that a mental age of at least four years is required before retardates consistently score within the norms of the test. With respect to the second question, we have found that administration time of the ITPA with retarded children averages only about one half hour. This considerably enhances the value of the test for us as a research tool due to the economy of time.

Administrative Problems

Several specific problems in the administration of specific subtests warrant mention. Two such problems have been noted by every examiner who has been involved in our testing at Peabody. The foremost of these is the difficulty in consistent administration of the visual-motor sequencing subtest. Examiners have found the materials for this test to be overly clumsy to work with and have suggested that difficulty in understanding directions accounts for many low scores, rather than weakness in the area which the subtest is supposed to test. It might be noted here that in spite of this apparent difficulty with administration of the test, it correlated higher than any other visual or motor test with total LA. This would suggest that the scores may not be seriously affected by the difficulty in administration. A second problem which has been noted repeatedly is the difficulty experienced by many subjects in making the transition from object to picture stimuli on the motor encoding subtest. If demonstration items could be included which make use of a picture stimulus, this difficulty might be considerably lessened. Several examiners have also noted that the first four items of the visual-motor association subtest are difficult to administer and that many subjects appear to have greater difficulty with these early items than they do with subsequent picture items. A minor point, but one noted by several examiners, was the difficulty of administering the digits on the auditory-vocal sequencing subtest at a rate of two per second when they were so accustomed to the one per second administration of digit span on the Binet and Wechsler. A few questions concerning specific items in various tests and order of presentation have also come up, but these have not been sufficiently consistent to warrant discussion.

Projected Research

Results of our early work with the ITPA have been fairly encouraging, and it is anticipated that this instrument will continue to be used at Peabody in the future. Peabody is strongly committed to study of language abilities in retarded children and to the study of methods of overcoming language deficit. It seems very likely that we will continue to use the ITPA as a criterion measure in the evaluation of pupil growth associated with language training. We also anticipate further use of the ITPA in evaluating language abilities and patterns of retarded children generally. Since we plan to use other instruments, such as the Mecham Language Development Scale and the Parsons Language Sample, in connection with further studies in this area, these studies should also provide an opportunity to investigate the concurrent validity of the ITPA in terms of its correspondence to other measure of language functioning. We also hope to carry out additional research of a longitudinal nature, which will provide further opportunity to investigate the reliability of the ITPA and to examine patterns of language growth. One study which is already in the planning stage will examine the possibilities of using special class teachers and speech therapists to carry out a language stimulation program similar to that used by Smith. This study should also give us an opportunity to evaluate further the reliability and validity of the ITPA. Though our early studies have not considered differential treatment of children with differing language patterns, it is anticipated that future research may touch on this area. Such research would likely be carried out on a group basis, as opposed to the considerable work that has been done in this area at the University of Illinois. We also feel that research into the use of language scores as a predictor of school success might be of value. Our early thinking is that language age may prove to be a useful supplement to the IQ in planning placement and services for retarded children.

Summary

To date, four studies using the ITPA have been carried out at Peabody. Smith used ITPA scores as a dependent variable and showed that a group which was given a language stimulation program made significantly greater gains than a matched group which received no treatment. Mueller and Smith investigated the stability of these gains and observed that the experimental group tended to show some superiority to the controls at about one year after treatment. Mueller and Weaver compared day school and institutional TMRs in terms of ITPA scores and found the institutional group to be consistently and significantly superior. This study also showed that TMR children were superior in visual and motor channels as compared with auditory and vocal channels and that encoding abilities were particularly weak. A factor analysis of the ITPA scores on 118 retardates by Semmel and Mueller indicated good factor validity of the ITPA. Though we have not systematically investigated variables concerned with the administration of the ITPA, it seems appropriate to present some of our impressions based on the administration of approximately 250 ITPAs to retarded subjects. We have generally found that administration time for the ITPA runs about 30 minutes with retarded subjects. We feel that the test has some utility with retarded subjects well beyond the age of nine and a half, as might be anticipated by the normative sample. It appears that the test has sufficient top to be used with retarded subjects up to a mental age of about ten years regardless of CA. At the lower end of the scale, our impression has been that a mental age of about four years is required before scores consistently fall within the norms of the test. Our experience with training examiners in the use of the ITPA has been that persons experienced in the administration of individual tests can develop skill with the ITPA with little difficulty. However, efforts to train persons without such previous experience have met with only limited success.

Max W. Mueller, Graduate Fellow in Mental
Retardation, George Peabody College for
Teachers, Nashville, Tennessee

ADMINISTRATIVE PROVISIONS FOR THE GIFTED: MANDATES

James H. Perry

Administration is the sinew which binds books, buildings, and people into a school system. Good administration will likely yield excellence; anything less must produce a less desirable result. It is the purpose of this paper to set forth some basic principles, some imperatives, if you will, in the administrative process related to the establishment and continuation of commendable programs for gifted children.

The very term "gifted" itself, implies a special kind of uniqueness which has already caused the literature to be filled with definitions, interpretations, and generalizations concerning its meaning. The immediate inference, we would hope, is the need for setting intellectual boundaries and other characteristic dimensions which will serve to identify the child as gifted, more able, academically talented, or some other designation of superiority. The administrative implications appear to be quite clear. Even though a variety of disciplines is generally utilized in establishing recommended criteria for the identification and selection of bright students, it remains the function of administration to promulgate such criteria, to accept the responsiblity for their use, and to provide proper interpretation at all levels of school and community life affected by the proposed program.

In many school systems, the responsibility for meeting the needs of superior students is delegated to the individual school. It is not at all rare to find that responsibility passed onto the individual teacher. On the other hand, the school system which commands respect for its general excellence as well as for its attention to special needs of all children will invariably exhibit the kind of administrative leadership which permeates the entire school system and causes productive instruction. This type of administration will be firm in its statement of principles, yet flexible in matters of implementation at the classroom level. A reasonable first imperative, then, in the administration of a program for gifted children might well be the development of a favorable central office attitude based on the understanding of program needs and the acceptance of responsibility for the program at all levels.

Closely associated with the first mandate, yet important enough for separate mention, is the specific assignment of program responsibility to one person on the central office staff. While it is desirable that one person have the gifted child program as his sole responsibility, it must be realized that many school systems are not large enough to afford persons for single program duty. It still is mandatory, however, that only one person in the central office be delegated the administrative details of the program. Without such an arrangement, the lines of communication will be faulty, materials will be delayed, and follow-up and coordination will encounter gaps and be less effective. Refinement of identification procedures, in-service training of teachers, development of courses of study, and evaluation of the entire program are all administrative responsibilities which are more likely to be fulfilled through efforts emanating from a single source of responsibility in the central office. A second imperative, then, would dictate the selection of one person in a school system to exercise direct supervision over the entire program.

Following the matters concerning central office direction and control come the administrative functions at the individual school. These functions may well begin with the techniques of programming which bring the teacher and pupil together for purposes of instruction. It is at this point that many school programs lose their identity and uniqueness by attempting to conform to some label such as "grouping," "enrichment in regular class," "acceleration" or some other equally elusive term. These techniques mean many things to many people, and it is a function of administration, especially the administrator of the individual school, to see that the arrangement is tailored to the needs of pupils. It is equally important that established policies governing class arrangements do not become inconsistent with practice. This refers, for example, to those school systems which voice opposition to so-called ability grouping or special classes for gifted children during the regular school year, yet provide summer classes on a tuition basis and restrict admission to students with IQ 130 and above. It would appear that this kind of inconsistency might be difficult to defend.

If we assume the existence of a favorable school attitude and a group of well-selected pupils who need a differentiated curriculum, the what and the how of differentiation are major administrative questions. It is of utmost importance that the administrator keep in mind the unique needs of the child who deviates significantly upward on the mental ability scale. To answer the question of what is to rarefy a curriculum which will parallel superior intelligence. To do less will be to defeat the original purpose of selecting gifted pupils. The discussion of curriculum is the topic of another paper, but the point here in the interest of administration is to be sure that the curricular diet is truly different, truly challenging, and not simply an extension of regular classroom work.

Techniques of programming for the instruction of gifted children usually begin with some kind of grouping practice. Ability grouping for at least a part of the school day is widely used, and in many of the heavily populated areas it is a full time practice. The direction which grouping practices take will reflect the administrative philosophy of the school system. If a school objects to separate classes for the gifted by saying that it is undemocratic or on the basis of some other equally groundless belief, it will usually be said in that school that the most able pupils are receiving the necessary special attention in some other way. All of us could probably guess that the "other way" would be the nebulous classroom enrichment method. It must quickly be inserted at this point that the classroom enrichment idea will certainly serve the needs of all children if the proper conditions exist within that classroom. Our question concerns the frequency with which these ideal conditions occur.

No doubt there would be general agreement that the conditions previously mentioned should include a masterful teacher, a concentration of materials suitable to the needs of slow learners as well as materials appropriate for those students whose abilities range sharply upward from what is considered to be normal, and a pupil-teacher ratio reduced significantly so as to allow time for the teacher to give proper attention to the divergent needs of the group. How many teachers could qualify as a master teacher? Ten percent? Twenty percent? Fifty percent? Whatever the answer might be, it surely would not approach the total teaching force. How many classrooms have continuous access to materials appropriate for a class representing the entire spectrum of abilities? How often could one find a class boasting a pupil-teacher ratio of twenty to one, or even twenty-five to one?

If a school administrator found only one of the three conditions present in each of his classrooms, he would likely be satisfied. If he found two of the three, the chances are that he would be quite surprised. But to find all three of the conditions present would likely cause him to offer a pedagogical prayer of thanks. The purpose of the foregoing suppositions is to simply emphasize the need for the administrator to be constantly aware of the dangers involved in assuming that one administrative technique is always sufficient to the needs of all children, regardless of their abilities. None of the duties of administration is more demanding or complex than that of converging pupil, teacher and materials to the point of optimum learning progress. It is imperative that schools recognize the possible limitations of any single plan for gifted children and make continuous adjustments in programming in the interest of challenging the superior intellect.

In order for the highly able child to progress without periods of disinterest or even boredom, it is sometimes desirable for youngsters to complete a grade or semester in less time than is ordinarily required. Infrequently, the practice of grade-skipping is also acceptable. It is important, then, for the administrator to accept the graded school for what it really is -- a creation of convenience designed to mark the progress of the masses through prescribed levels of difficulty and achievement. As widely accepted as this practice has become, it is less than adequate if it is too rigid to make appropriate adjustments from the routine in order to accommodate children whose deviant abilities likewise represent departures from the ordinary. It is imperative, then, that radical departures from conventional practices must characterize the organizational forms of programs for gifted children.

The special abilities and the attendant special needs of the most able pupils in our schools require expenditures of funds for whatever materials, teaching personnel, and special arrangements are necessary to provide for maximum pupil progress. This does not necessarily indicate an exorbitantly higher expenditure than is usual for regular classes, but special materials bought in smaller quantities will be expected to carry a slightly higher price. The suggested reduction in the pupil-teacher ratio will obviously produce a higher per pupil cost for instructional personnel. Adequate space for experimentation and independent study over extended periods of time will require slightly larger physical plants. The matter of extra physical space is usually the last concession made to special programs and is generally found only in economically favored communities. But whether these conditions exist or not, they are all necessary if maximal pupil growth is expected.

Inherent in every suggestion offered in this paper is the mandate that the administration provide continuous interpretation about the program at each step in development. Information must be presented to pupils, parents, teachers, and principals on all matters before, during, and after implementation. Knowledge and understanding will likely produce acceptance and success.

A concise summary might be that the ultimate responsiblity for a special school program rests with the administration, but the ultimate success of the program will depend upon how effectively that responsibility is delegated and applied.

James H. Perry, Supervisor of Special
Education, Louisiana State Department of
Education, Baton Rouge

REHABILITATING THE PHYSICALLY HANDICAPPED COLLEGE STUDENT: AN AGENCY POINT OF VIEW

Maurice J. Reisman

Who are these disabled people whose rehabilitation, sponsored partially or totally by the State-Federal Vocational Rehabilitation Agency, includes a college education? Who are these individuals -- or who should they be -- where in effect it would seem that to be disabled is an asset, i. e., if because of it a college education may be offered? What then is the rationale of such agency action?

The definition of rehabilitation comes into play here -- and there are many definitions: often it is described as a goal, a result; other times as a process; other times as both -- and these definitions are subject to various interpretations. The most popular definition of rehabilitation, of course, is "attainment by the individual of his maximum level of function in all areas of his life," physical, social, psychological, vocational, etc. This would imply that for each disabled individual, if declared eligible for rehabilitation services, college training would automatically be included whenever the client was able to benefit from this. There is another point of view that rehabilitation is the minimizing of the disability in every point of the individual's life, enabling him to compete on an equal basis with the general public. This would seem to mean that college training then would be provided only to that individual whose total life situation (i. e. severity of disability and its total effect) prevented his having equal vocational opportunities. Here the college education, i. e., higher occupational functioning and status, would tend to equalize the limitations set by the disablement or otherwise caused by the disability.

I speak of these different points of view and these different interpretations only to remind you that there is a philosophical basis in all of this and that there are different philosophies that are being and need to be re-examined. Actually I can give only one agency's point of view and this is all I wish to do. The latter interpretation of the role of the college training in rehabilitation is the point of view of our particular agency. The degree of the handicap arising from the disability on an individualized basis is related to the need for such high level training as a means to equal competition for jobs. As concrete illustrations we would think, for example, that the individual with a repaired hernia would probably not be provided with college training. The disability has been removed, and there no longer is an employment handicap. Education has not been seriously hindered, and there has been no long sustained immobilitating or deteriorating effect resulting from the disability. Now take another example -- a seriously involved cerebral palised youth with superior intelligence and outstanding in mathematic abilities who was graduated with a B. S. and was still unemployable. Teaching was out of the question, and in accounting he was still at the bottom of the list. Graduate training in mathematics, preparing him for advanced research work in mathematics, was the happy justified choice for him, although graduate training is unusual. With additional training he competed on equal footing and in accordance with his ability, minimizing his disability, and he is contributing to our economy at a high technical level.

Let us now discuss eligibility criteria, screening processes, case work-up, supervision of training, and then finally some of our evaluations and observations of results.

Eligibility

Ability - College training as a means of reaching a vocational objective should be limited to clients whose motivation and scholastic achievement are reasonably high. An average of 85 (B) or higher and standing in the upper fifth of the high school class generally indicate above average scholastic achievement; however, the existing differences in educational standards make it manifestly unfair to attempt to determine ability to do college work solely upon this basis. The determination of college ability should be based primarily upon the following test results: (a) a score at the 75th percentile or higher (first quartile) on any recognized adult intelligence test and (b) a total score at the 50th percentile or higher on the American Council of Education Test, freshman norms, or School and College Ability Tests (SCAT), college norms, or the scholastic aptitude from the College Entrance Examination Board (CEEB) at 500 or higher. The linguistic (L score) sub-score should be at the 50th percentile or higher for clients seeking the liberal arts education; for clients wanting to major in the field of engineering or applied sciences a qualitative (Q score) sub-score at the 50th percentile or higher should be indicated. Some slight variation to these rules can be justified if there are other special aptitudes, extreme motivation, etc., which would compensate for any slight differences in the various scores. The establishment of the 50th percentile for a minimum requirement for college training is based upon the reliability of these tests to predict the general success or failure of college freshmen who score above or below this level. In this connection it should be noted that rejection of a client for college training should not in itself preclude the possibility of providing him with other training consistent with his abilities and interests, since establishing a suitable vocational objective with the client is a major responsibility of the counselor in the counseling and guidance process. On the other hand, the counselor should not advise or encourage clients who do not meet the prescribed standard to enroll in college with the hope of attaining Bureau assistance in the event that passing grades are obtained. Such a practice injures both the client and the program.

The application of these criteria are implemented by a screening committee at the local district level. It consists of the district administrator, the counselor, his supervisor, and the medical consultant. This committee is also responsible for the review of all continuance college cases at the end of each college term.

Performance requirements - Failure to achieve satisfactory semester grades and to attend class regularly will be considered sufficient reason to terminate the training. Such action does not preclude reconsideration in situations where the individual successfully completes a subsequent semester of training and still needs financial assistance to complete the training. In this connection it is the established policy of the Bureau not to pay for repeat courses.

The fact that a disabled individual is already enrolled in college with a definite objective in mind is not in itself sufficient reason to recommend expenditure of Bureau funds. To assist in the attainment of this objective, the basic conditions for eligibility and provision of services should be present, and the suitability of the previously selected objective should be re-established for an individual in this category, provided his grades equal or exceed the average standard of the institution in which he is enrolled. The inability of the client to complete his training without financial aid of the Bureau must be clearly defined.

Case Work-Up

The case work-up is the responsibility of the counselor. It includes all diagnostic material, the evaluation of this data, and should reflect the counseling relationship where the client was helped to move to the point where he was active in making judgements of his vocational needs and potential and in making decisions for his own vocational future. Planning for services must be on an individualized basis, which means reaching the individual behind the disability and not, for example, stereotyping by disability group. Stereotyping by vocational goals is also a danger. Where there are plentiful job opportunities in specific occupational areas, there is a tendency to herd people into such fields irrespective of their true interests or academic readiness. This has to be guarded against through case work-up and screening. The counselor must also be aware that some severely disabled individuals may be able to meet academic requirements for specific vocations but be unable to secure and/or physically function at such a job following graduation. Being a party to such training is a serious disservice to the client and may cause irreparable harm as well as an appalling waste of funds.

A Supervision of Training

The supervision by an agency of the trainee is regarded as important, and efforts are made to see the college student once a month. Close contact must also be maintained here with the school officials. Progress or lack of progress is the subject of these monthly counseling sessions. Again, as in all counseling, there must be understanding of the individual trainee and his characteristic way of reacting to problems. One formula in serving all trainees will not generally make for progress in the training program. The supervising counselors of the agencies usually will not be the counselor who originated the training plan. In some instances, where there is a large volume of agency-sponsored students, a supervising counselor will be devoting full time to such an assignment at that university. It is desirable that such a counselor be closely identified with the school. In this way he can be much more effective in interpreting progress and even be helpful in such important tasks as, for example, making clients acquainted with the college guidance counselor, acquainting clients with courses, helping arrange conferences with college administrators to work out course change, etc. Many of these problems encountered in college training are, of course, the same as with the non-disabled. Depending upon the disability, however, and on such items as the size of the university, many additional problems are "tacked on." A polio residual with leg braces has difficulty ambulating on a large campus, especially during the winter months, and may have to terminate training during the period January through March and continue his training during the spring months.

In a recent survey made of colleges in the state to determine which permitted access by wheelchair students, we found (a) four in which all classrooms and dormitories were suitable for wheelchairs and (b) nine in which most classrooms and dormitories were unsuitable for wheelchairs.

In a recent survey, conducted expressly for this paper, counselors serving full time in training supervision were contacted. It was found that in the greater share of problems encountered there was difficulty adjusting socially -- lack of understanding of how to mingle or socialize in campus activities and lack of opportunities for recreation -- directly or indirectly resulting from the disability. These trainees had been previously exposed to small classes and confined school programs, and they were unprepared for more active gregarious college activities. This would certainly apply also to the non-disabled, but they would probably be more adaptive physically. Inability to make social adjustments was suggested by the counselors as the leading cause of failure to graduate from college. In answer to a question in this survey, counselors estimated college successes among the disabled as ranging from 70 percent to 95 percent.

Some Statistics on our Activities in the Sponsorship of College Training

In our state program, we have upward of 800 disabled persons undergoing college training at any given time. About 5 percent of these are from out of state. In the last fiscal year, 249 of such college cases achieved rehabilitation. This is 2.6 percent of the total number of rehabilitants for that year. It should be mentioned here that we, in the past, limited college training for any one student to 36 weeks per year for a total of 144 weeks. Now we allow the amount of time normally required to complete the course. This permits the student to complete established five-year engineering courses, for example.

Now for some more characteristics of this group of 249 disabled persons who completed their college training and proceeded to become satisfactorily employed. Most of them were referred by public high schools. Twenty percent had already had some college training. Two hundred were males. In almost all instances, the primary source of support was the family. A very high percentage had never worked before onset of the disability and a less, but still very high percentage, had not worked after onset of the disability. At the time these individuals were considered as having achieved rehabilitation, 239 were salaried workers, one employed in a sheltered workshop and nine others self-employed. Disabilities represented the broad range of disability groups. The largest was orthopedic; cardiac was also high; and there was a smaller but significant group of 12 whose category was former mental illness. Of this total group, about 25 percent were provided with physical restoration services. Their mobility at "closure" did not change from that at "acceptance" -- "capable of activity outside the home without help of other person." The job or occupation at closure for a majority was at the level of professional; however, there was some slight distribution at lower ends of the occupational scale. The earnings of the largest group at time of closure were from $80 to $89 weekly, and the majority located their own jobs. The average cost was $991. Of five who were considered non-rehabilitated and who did not complete training, the average cost was $409.

Conclusion

I have been attempting to give here the reasoning, the views, and the policies in selecting the disabled individual who will be provided with college training as part of his rehabilitation. Also, I have attempted to outline the major eligibility criteria, the development of the rehabilitation plan with the individual, the supervision procedures and policies, the major problem areas encountered (many of which are typical of the non-disabled as well), and finally some of the simple socio-economic characteristics of this group of students. In conclusion, I will comment on the implementation of these policies which often appear inconsistent.

I spoke earlier of the non-disabled having similar problems, and we must bear in mind that not all disabled are handicapped. One does not necessarily follow the other; the terms must not be equated. To do so is its own form of discrimination. It puts a premium, a value, on disability, and in effect it discriminates against the non-disabled.

It is not intended that all disabled with college ability should be the recipients of such special services. The clear establishment, however, of a substantial handicap arising from the disability where college preparation will remove this individual from secondary citizenship -- this is another matter. Examples of such handicaps are a narrowed field of occupational choice, a lack of opportunity where, due to the disability, there was no previous preparation for fields for which one was otherwise qualified. For those persons then who are selected for a college program, there must be high standards for their admission and continuance in such training. It must be conceived on a scholarship basis. Our own criteria reflect that there must be not only the usual intellectual capacity but that it should be slightly higher than required by most universities. To qualify for this scholarship there must be not only these intellectual requirements but also an effective adjustment to the disability -- emotional growth and maturity, which help assure successful completion of the college program. When the wrong person in a program as this has gone to college, the error usually was to give the client the benefit of the doubt -- in itself, not the most repulsive kind of mistake, though its effects may be serious. In our concern for the disabled, it is often difficult to make judgements against anyone in distinguishing between these matters of disability and handicap, of "college eligible" or "not college eligible."

To aid in making correct judgements and in planning positively for the physically handicapped who require and can benefit from a college education, we need:

(a) to use effective evaluative tools and techniques and college guidance services (we have these now and the physically handicapped should be in the family), (b) a philosophy about college education -- when it is needed and when it may not be needed, (c) a philosophy of the "handicapped disabled" -- a recognition that there is some difference in the two terms so that we neither overestimate nor underestimate their needs.

Maurice J. Reisman, Administrator of
Special Services, Pennsylvania Bureau of
Vocational Rehabilitation, Harrisburg

SOME RESEARCH-RELATED THOUGHTS ON EDUCATION OF THE GIFTED

Maynard C. Reynolds

(Dr. Reynolds' presentation appears in its entirety in Exceptional Children, September, 1963, Volume 30, Number 1, pages 6 - 11. The summary included in his paper appears below.)

Summary

I have taken you on a somewhat rambling journey touching upon several ideas. First, we have considered briefly the confusing array of views concerning the structure of intellectual abilities. Views concerning the nature of intelligence are important as a "take-off" point for deriving educational ideas and practices. It has been suggested that by orienting in terms of decision theory, especially the distinction between selection and placement decisions, there may be a way of having our cake and yet eating it-- of using the "g" position and yet also using the more complex views on the nature of intelligence. The hierarchical theories of intelligence lend themselves nicely to this way of thinking. But "facet theory" may be a still more useful approach.

We have noted, with respect, the recent research stimulated by Guilford's work. Many questions might have been raised in this context. I chose to emphasize especially the linkages which appear to be emerging among personality characteristics and cognitive processes in connection with the "creativity" research. On even a broader front, much work suggests the growing importance of looking further into such links. Some of the older views about personal and social characteristics of the gifted may be fading.

Finally, I've raised once again Wolfle's ideas on specialized education -- the need for idiosyncrasy in educational programs according to the special talents of children. I've made no recommendations here; only raised some issues. More issues, and perhaps more important ones, could be raised, but interest and time have limited me.

Maynard C. Reynolds, Professor and
Director, Department of Special Education,
University of Minnesota, Minneapolis

HIGHER STANDARDS AND BETTER PROFESSIONAL TRAINING FOR TEACHERS OF HOMEBOUND AND HOSPITALIZED CHILDREN

M. Leigh Rooke

The attention being directed here to curriculum enrichment and to counseling and guidance for homebound and hospitalized children and youth, of necessity, invites consideration of the standards of teacher preparation for these important teaching functions. Essentially, what we are talking about is educational quality. When the ingredients of quality are determined, they become the yardstick for: (a) evaluating the adequacy of the programs we have, (b) assessing the programs we need, and finally, (c) establishing the means by which the determined goal can be reached.

If this premise for the role of quality education can be accepted, standards and professional preparation lose their separateness. They are not something to be compiled into a neat list, to be implemented through a series of college courses, and then, the job finished, to be enjoyed as a job accomplished. It would be simple and easy to do it that way, and perhaps in the very simplicity of this solution lies the fallacy.

Home and hospital education is, first, education; very secondary to this fact is the circumstance of its physical location. Therefore, we must begin with a clear definition of what education is, its goals and objectives, the dynamic properties that give the goals meaning, the forces and instruments for effecting an educated person. Then we come to standards -- standards for all education. Only when this sequence has been followed can one direct attention to a single facet of the whole. Only then can each educational force in the society define its role and its limits. It is at this point that we may begin, with honesty, to talk about quality of education, for quality is a condition and its ultimate meaning must be related to quantity. Neither is an entity, separate and apart.

For purposes here, we shall assume that we have determined what education is; what the area of responsibility for the professional educator is, both his specific responsibility and his cooperative responsibility. We shall assume also that we have deduced educational goals and objectives and the sequential body of specific contents with which we shall strive to attain the goals. With these basic assumptions, and only then, we are ready to look at how these attainments, or educational change, can be achieved specifically for children and youth who are homebound or hospitalized. Pinpointing this concern still further, we shall consider more specifically the catalyst, the element producing the change or reaction.

Now, it would seem appropriate here to eliminate from our thinking the comparative adjective "higher" in regard to standards and later, that we do the same thing with "better" in relation to training. These words carry the import of the adequate being improved, of the acceptable being strengthened. In truth, neither connotation is a condition of fact. What we are talking about today is the fundamental need for defined standards and training without any adjectival embellishments that would create false security.

May we digress for a moment to answer the unvoiced question now arising about state certification requirements in special education and whether these are to be regarded as a set of standards. The answer which seems inevitable is that state certification requirements are not standards. Instead, these are some person's or group of persons' determination of criteria for license within a jurisdictional area or region. As proof that such license tools are not meaningful professional standards, it is possible that such a paper structure may exist within a state without one single educational provision in that state for meeting the defined competencies enumerated. Needless to say, true standards are not artificial; they are not conditions superimposed upon a profession. Standards of quality are the self-imposed controls within a profession, the measurements of integrity a professional person sets for himself. It is the collective profession's safeguard against detrimental forces within or without.

Considered in this total setting, the standards we seek for instructors of homebound and hospitalized children are:

1. The basic standards for all education
2. The personal competencies for teaching children and youth who have handicapping disabilities
3. The special knowledge, skills, and techniques for implementing basic educational objectives in teaching those whose disabilities constitute obstacles and limited opportunity for learning
4. The reasonable expectations for academic achievement and learning in restricted educational environments
5. The realistic service limits defined on the basis of educational goals.

Adhering to the subject with which we are primarily concerned here, the last three points are the ones to which we will direct our attention. How can we establish standards of adequacy in goals and in the special knowledge, skills, and techniques for the education of homebound and hospitalized children? If this is accomplished, how can we achieve the college and university program for the preparation of these teachers with a firm adherence to the standards set?

At the risk of oversimplification, may I say it begins here -- in this room -- in The Association of Educators for Homebound and Hospitalized Children. Who is more interested in the solution to the problems presented than those who raised the questions initially? In addition to this Association's general membership of seriously interested and personally committed professional educators in this specialized area, there are teacher educators, authors, and other knowledgeable persons whose work has identified their concern for this problem. Here is the nucleus with which to work to accomplish the delineation of the standards that this organization can support and promulgate with confidence born in constructive achivement.

As a stimulus to your thinking about this challenge which I offer you, I should like to propose several of the many areas for study and decision in determining standards to qualify teachers for homebound and hospitalized children:

1. What is our philosophy of education for homebound and hospitalized children?
2. What general special education courses are needed to afford broad knowledge of the variety of disability types to be served?
3. What specific courses in teacher education will be needed related to the child isolated in his home? Which ones associated with the medically controlled treatment environment of the hospital?
4. Does the home and hospital teacher have a special need for competency in counseling and guidance and in understanding the functions of rehabilitation services in the community?
5. Although often working essentially alone, does this teacher have special or different need to understand and to participate in team efforts?
6. Working most often with individual children or with small groups of two or three, is there a special need for skill in planning and organizing essentially tutorial work which is different from the concept commonly found in classroom teaching?
7. What controls should there be for effective teaching with regard to pupil-teacher loads? How are these determined?
8. What constitutes effective coordination and supervision of home-hospital teaching? Who does it?
9. How does the teacher cope with the problem of wide age and academic differences in this work?
10. How does one interpret and achieve "curriculum enrichment" in a home or hospital?

11. What adaptation and modification skills are needed in small community-rural programs in contrast with those in closely populated urban areas?

12. Is it possible to accomplish this specialized teacher education preparation in an undergraduate program which must include also the minimum elementary or secondary preparation together with practice teaching as well as the special competencies needed? Will it be necessary to dilute all phases of training to accomplish it, or is this to be a graduate program?

After the standards have been established and the colleges that have cooperated in their evolvement have contributed strengthened course and practicum programs, the achievement will remain an academic gain until the effective level of this program is reached -- namely, the schools and the treatment facilities in the local communities. This will mean an orderly and concerted effort, a bombardment of logical presentations reaching boards of education, school superintendents, hospital administrators, and state education officials. In quality programs, there is economy, and this point will need to be made with logical clarity. This will mean not only the professional teacher awareness of what the establishment of standards and adequate training to meet them involves, but an equally clear unemotional understanding of the historial development and use of home and hospital instruction, of administrative values that have structured implementation of these programs, and of the honest achievement levels of children in the programs.

In short, before there can be higher standards there first must be standards; and training, to be meaningful, must be in relation to standards. We license persons to drive cars, to practice law, and to teach. The quality of the performance varies widely. It is the imposition of standards of quality and an exacting adherence to these standards that will be meaningful.

The word "profession" comes from a root that means "bound by a vow" and an English definition today is "the faith in which one is professed or to which one is openly, publicly admitted." A professional person is one "conforming to standards." We are making the beginning today as we seek to look to the future of home and hospital instruction with standards as a goal. It was Goethe who said:

> Only begin and then the mind grows heated;
> Only begin and the task will be completed.

Another writer expressed the same idea when he wrote that "action releases ideas to bless and to benefit." Some years ago, a small group of our forefathers met in this same city. They too had an idea. The reality that we are here today facing a problem which we are free to solve gives evidence of the tremendous force of an idea when followed by concerted and vigorous action.

M. Leigh Rooke, Associate Professor,
Medical College of Virginia, Richmond

TEACHERS FOR THE GIFTED: MANDATES

John H. Sandberg

The Southern Regional Project Tours took us into classrooms all over the country. In those classrooms we saw teachers: short teachers, tall teachers, fat teachers, skinny teachers, young teachers, and old teachers. My assignment is to try to pull together some generalizations about teachers for the gifted based on our collective experience during the Project.

Let me say first that this is not an easy task. People seem to resist being generalized about, and teachers are no exception. As is usually the case when we try to pigeonhole human beings, some of the pigeons do not fit the holes. For instance, a good teacher for one gifted child might not be good for another, and a good teacher for a group of gifted third graders might not be good at all for a group of bright high school seniors. While observations like this are admittedly trite, I think they might help us to remember that we should use caution when we make pronouncements about teachers for the gifted.

Now, with a firm grip on our caution, let us examine a few generalizations to see how much truth they contain. Let's begin with the one that is probably heard most often:

1. "The teacher of the gifted must be gifted."

Stated another way, this might read "Gifted students must have gifted teachers." Immediately we run into a semantic difficulty; the word "gifted" has a different connotation when applied to children than when used to describe teachers. We usually think of a gifted child as one who displays a high level of general intelligence. A gifted teacher, on the other hand, is one who demonstrates an unusual ability to teach, an ability beyond mere competence. Being a gifted teacher, in other words, involves something more than intelligence. Probably most gifted teachers are unusually intelligent, but not all unusually intelligent people are gifted teachers -- or even competent teachers. I am sure that many of us have suffered, at one time or another, in the classrooms of men who were brilliant scholars or scientists but totally inexpert teachers.

I do not think that teachers of the gifted must be gifted, but I do believe they must be intelligent -- intelligence being foundational to other necessary attributes which we will talk about in a moment. I don't believe that any of us in the Southern Regional Project saw a good teacher during our classroom visits who was not obviously above-average in intelligence -- and I doubt that we ever will. Dull-minded people don't make good teachers. Good teaching demands intelligence whether in the kindergarten, the college, the gifted class, or the retarded class. It is true of course that bright children make special demands upon a teacher, just as retarded children make special demands of a different kind. Some intelligent (or even gifted) teachers are better suited to work with the gifted, and others with the retarded.

What is it, beyond intelligence, that goes into the makeup of a good teacher for gifted children? Let us examine another generalization for the light it might shed on this question.

2. "The teacher of the gifted must be a student of human growth and development -- and of the psychology of learning."

On this I think we can agree, but so must every teacher. What is it that the teacher of the gifted must know that others can get along without? Obviously he should know something about gifted children. While not everything is known about gifted children or about how to educate them, there is some valuable information available to anyone who wants it. It behooves every teacher who would teach gifted children to know as much as he can about them and about how to teach them. While this could be learned through personal trial-and-error experience, it would probably be better for the teacher to study the accumulated experience of others as it is recorded in the growing body of literature in this field. This kind of knowledge might have prevented some of the things that we saw on our school visits, such as the arithmetic classroom where twenty-five bright students sat literally groaning in boredom while the teacher plodded through a blackboard exercise that would not have challenged a group of trainables -- or another class in which the teacher permitted one student to monopolize the whole period putting meaningless calculations on the blackboard while the rest of the group dozed in silence. The whole purpose of grouping bright children together is defeated if the teacher does not know how to adjust her classroom techniques to the markedly different capabilities and needs of such a group.

At least these two things, then, are indispensable in the teacher of the gifted: intelligence, and the ability to adapt his teaching to the special abilities and needs of gifted children. What else can be said about the teacher of the gifted? Here is another generalization that is frequently heard in one form or another:

3. "The teacher of the gifted must have extensive knowledge of one specialized area plus broad knowledge of all related fields."

This would be desirable, of course, but it does not seem very realistic. "Renaissance men" are not easy to come by, especially at $4000 a year. I don't think we can expect elementary school teachers to have encyclopedic knowledge about all of the things we ask them to teach, and I think we are getting away from the idea of the teacher as an inexhaustible and infallible source of information anyway. At least as important is the ability to cause children to want to learn for themselves. In fact, one could probably make a strong argument that the best teachers for the gifted are those who don't teach so much, at least in the traditional sense. They are people like Mrs. Hirsch, the first grade teacher we saw in the Colfax School in Pittsburgh, who somehow manage to create a classroom environment in which an enormous amount of learning takes place with relatively little "teaching." Teachers like Mrs. Hirsch know what bright children can do; they know what to put in front of them in the way of questions, challenges, and materials, and they know when to get out of the way. They spend more time asking good questions than giving answers.

This is not to say that knowledge is not essential for a teacher of gifted students, especially for the high school teacher who is responsible for a particular subject matter area. Naturally the high school teacher of physics needs to know more about physics than the third grade teacher, and it certainly is desirable that he know more than his students. But every teacher who works with bright children must be prepared to admit gracefully that he doesn't know everything. The teacher who can't admit that he is wrong, or that he doesn't know, will lead an unhappy life as a teacher of gifted children.

On the other hand, it is possible for a person of relatively narrow interests and knowledge to be a good teacher for gifted children. It is quite conceivable that a history teacher who eats, sleeps, reads, and talks nothing but American history could be an excellent teacher of that subject, especially for bright students. Most of the good teachers we met on our visitation tours, however, are people who know something about, and are interested in, a lot of things. They are in the habit of reading books (not a characteristic of average teachers, unfortunately). Moreover, they are inclined to think occasionally about what they read and they have opinions. We found that they usually knew if there was a good play in town -- and they always knew a good place to eat, as several of my colleagues can testify. But most important was the fact that they had not stopped being learners themselves. Perhaps, all things considered, the single most important attribute of the good teacher of the gifted student is that he is invariably a student himself, actively engaged in the pursuit of knowledge and striving to be a better teacher.

To sum up, I think that those of us who took part in the Project would agree that the good teachers we saw were intelligent; they understood the capabilities and limitations of the bright children they worked with; they were intellectually alive; and they created an atmosphere in their classrooms in which learning flourished. These are the qualities we would look for in a good teacher for the gifted.

One final note: if an administrator is lucky enough to have a teacher on his staff who is highly qualified to work with gifted children, then he certainly ought to make the most of his good fortune. The practice of rotating the task of teaching the gifted group through the entire staff as though it were some kind of reward (or punishment) seems to us to be completely indefensible. Our supply of good teachers for gifted children is not yet so abundant that we can afford to use them unwisely.

John H. Sandberg, Curriculum Planning
Specialist, State Department of Public
Instruction, Harrisburg, Pennsylvania

DIAGNOSTIC, EVALUATION, AND REHABILITATION CENTERS FOR HANDICAPPED CHILDREN

Harrie M. Selznick

A universal problem has been the unavailability of comprehensive diagnostic and rehabilitation services for the handicapped child. The multiple handicapped child requiring the services of many different clinics, the problem of the child who resides in rural areas where specialists' services are not readily available, a general shortage of professional personnel, the problem of proper placement of children with unusual needs for whom no adequate diagnostic workup has been done, are some of the problems with which persons concerned with the handicapped are confronted. Centers which have been developed operate on the philosophy that the evaluation of the handicapped child requires a multidisciplinary approach since many children with impairment in one organ have impairment in function in another organ or system, and until studied the presence of multiple defects cannot be ascertained. Likewise in the treatment of such patients, the services of professional personnel are required for the optimal care of the child and advice to his family.

Thorough diagnostic evaluations provide the essential foundation for planning all other programs and services for children with handicaps and for their families. Short or long term planning for treatment, training, and management cannot be done realistically nor can the parents be counselled in understanding and acceptance of the multiple implications of handicaps without the results of an adequate evaluation of pertinent medical, psychological, and social characteristics and needs. In order to insure diagnostic evaluation for all handicapped individuals, some means must be found to identify them and to bring them in contact with adequate diagnostic services.

Maryland Development of Diagnostic and Evaluation Centers

While centers have been organized in several isolated sections of the country, there appears to be no common pattern of organization, staffing, services, or financing. In the effort to identify the processes and procedures by which an effective program of diagnosis and evaluation might be organized, the following description is presented.

In 1956, the Medical Care Committee of the Maryland Planning Commission appointed a sub-committee on Medical Services and Facilities for Handicapped Children. This committee included representation from voluntary and public agencies, including labor, health, welfare, education, vocational rehabilitation, and others interested in the needs of the handicapped. Its charge was to obtain estimates of the prevalence of physical, mental and emotionally handicapping conditions, to provide an objective opinion of the special medical needs of these children, to survey facilities and services in Maryland for case finding, diagnosis, treatment, care and rehabilitation of these children, and to recommend improvements in services.

The first major report of this committee recommended the establishment of diagnostic and evaluation centers for children with complex or multiple handicaps.

It was suggested that these centers be developed at the Johns Hopkins and University of Maryland Hospitals to provide diagnosis, evaluation, and initial treatment and rehabilitation. It was suggested that these centers should have a wide variety of specialized services coordinated under responsible direction and should serve as many children as possible consistent with high quality service. For some children initial treatment and rehabilitation would be started while the child was in the clinic so that the effectiveness of the chosen treatment might be evaluated.

The recommendations of the committee included plans for long range treatment at orthopedic hospitals which are associated with the two clinics. The long range treatment centers could expand services and then complement the services provided at the diagnostic and evaluation centers. If long range treatment were attempted in the diagnostic centers, it was felt that the usefulness in serving the great need for diagnosis and evaluation would be limited. The existing clinic, educational services, and other facilities in the local communities were to provide most of the follow-up treatment.

In the opinion of the sub-committee, the creation of the proposed centers was the most important effort needed at that time for handicapped children in Maryland. Through this approach not only would children with need have opportunity for assistance but an approach to the personnel shortage could be made because of the additional opportunity for training which would be made available by the centers. An additional gain through this approach could be the facilitation of research into the causes of handicapping conditions.

The sub-committee on Services and Facilities for Handicapped Children in Maryland specified 21 and under as the age range. The Maryland State Department of Health in its Crippled Children's program also cares for children in this age group. The establishment of diagnostic and evaluation centers raised the question of medical responsibility because the age span from birth to 21 years covers the period when the child grows to be an adult and because medical responsibility is traditionally transferred from departments of pediatrics to departments of medicine.

Most handicapped are born with their handicaps or develop them shortly following birth and will at least initially be in the age group cared for under pediatric services in hospitals. Handicapping conditions in others develop or become apparent in later life. There are also those children whose care begins in early life and extends through adolescence into the adult years. Still another factor is the adolescent immature child who is better cared for in a pediatric unit, and conversely, the young child whose treatment calls for association with older boys and girls. An effort for early detection should be made so as to prevent secondary handicapping conditions.

The interests of pediatricians meet with those of internists in the years of adolescence of the handicapped child. Because of the broad age range of the children to be served in the proposed centers and because there should be no break in the continuity of care as a result of age, pediatricians and internists must have a smooth working, cooperative arrangement for the care of children served in the centers.

In order to provide continuity of care and to best service children under 21 years of age, both the pediatric and an adolescent unit should be developed within the diagnostic and evaluation center. The pediatric unit would be under the Department of Pediatrics and the adolescent unit would be jointly administered by the Department of Medicine and Pediatrics. A child would be placed on the basis of maturity rather than chronological age. An important function of the adolescent unit would be to prepare a child for transfer to adult medical supervision.

Because the Crippled Children's Division of the Maryland State Department of Health had particular difficulty in obtaining hospital diagnostic and treatment services for the children whom they serve who fall in the age range of 14 years to 21 years of age, special attention was directed toward the organization of services for this group of young people. This latter aspect, while proposed, did not materialize.

Two diagnostic and evaluation centers were established in 1958 as a result of action taken by the Maryland State Legislature. The sponsorship of these centers was assigned to the Crippled Children's Division of the State Health Department. In each instance, a contract was arranged between the Crippled Children's Division and the particular medical school by which services were purchased by the Maryland State Department of Health and provided through the Pediatric Department of the School of Medicine.

Private as well as medically indigent patients were referred to the local health department. All medical, social, educational, and financial information was collected by the health department. Referrals were then made to the State Crippled Children's Program, and the patients were assigned to one or the other Center for evaluation and recommendations. The follow-up services were to be in large part the responsibility of the local community utilizing the existing network of clinic and hospital services, mentioned previously, and other local facilities. Re-evaluations to determine progress were to be done by the Centers as indicated for the individual children.

A major problem for parents has been the inability to provide transportation monies for the several trips necessary for completion of the studies. Where necessary, the Crippled Children's Division of the State Health Department pays for both room and meals for the parent and the child during the stay in Baltimore for the evaluative process. Housing has been arranged for in the vicinity of the hospital. In no case is a hospital bed used as housing for a patient during the stay since it is felt that hospital space which is quite limited should be reserved for those with a different need.

Description of the University of Maryland Hospital Diagnostic and Evaluation Center

Organizationally the staff of this Center is responsible to the Chief of Pediatrics of the University of Maryland Medical School. Budgetary control is exercised by the Medical School although the actual appropriation comes from the State Health Department.

Schedules for individual cases are arranged to best fit the needs of the individual family. The usual case is scheduled for one or two evaluative sessions per day with appointments being held a week apart. Where the situation suggests and the family can arrange personal circumstances, the process is consolidated into a three day period.

The regular schedule for the day calls for the patient to be seen at the clinic beginning at 9:00 A. M. While the pediatrician in charge meets with the patient's parents for an explanation of the evaluative process which is to follow, the child is seen by the psychologist. A thorough physical examination of the child follows the psychological evaluation. At 12:00 o'clock the neurological examination is scheduled. Following the lunch period the child is seen by the consultants in the Speech and Hearing Section. From 3:00 until 4:00 P. M. all consultants meet with the Director for case staffing purposes. Additional needs are suggested at that time. Where a psychiatric workup is indicated, additional appointments are scheduled. Almost all patients are given an electroencephalogram. Before the parents leave the Center, additional appointments are scheduled and a date for final conference is set.

After all examinations and the final staffing have been concluded, the Director of the Center collects all data and prepares a summary statement which includes recommendations for treatment. At the final session with the parents, the Director of the Center interprets the report to the parents. An effort is made to distinguish between what is realistic in the light of available community resources and the ultimate in services.

Four copies of the report are prepared at the Center and sent to the State Health Department. One copy of the report is retained by that office and others are sent to the family physician, the local health department, and the school system which would most logically provide the educational program to the child.

The Johns Hopkins Hospital Diagnostic and Evaluation Centers for Multiple Handicapped Children -- Daily Functions of the Clinic in Patient Processing

Patients arrive initially at the clinic at 8:45 A. M. Parents are first seen by a clinic coordinator who explains the function of the Center and the plans for the day. In the meanwhile, the child has his height and weight, and picture taken, and a urine specimen is obtained if possible. Then the coordinator or social worker takes a detailed medical and developmental history from the parents while the psychologist begins his examination. The parents usually join the psychologist in the course of his testing. On completion of his tests, the psychologist usually counsels the parents on his findings.

Some time during the lunch period, the psychologist, pediatrician, and social worker get together and discuss the case. After lunch, the pediatrician examines the child, physically and neurologically, and obtains further historical information from the parents. He then, together with the social worker, counsels the parents as to the nature and implication of the child's problem, progress, school needs, and the parental supportive role. He also explains what further diagnostic studies may be necessary and sees that these are scheduled.

When necessary, further counseling is planned after such studies are carried out or when it appears needed to further clarify the problem with the parents. On completion of counseling, the social worker interviews the parents.

Each member of the team writes up a separate report of the case. Once a week there is a conference of the staff, including the clinic director, pediatricians and social worker, to review all the cases of the week before. At this time, a preliminary diagnostic and recommendations formulation is made up and is forwarded to the Division for Crippled Children for appropriate distribution.

All of the separate reports, together with consultation and laboratory reports, are collected on completion and a summary report or final letter is written by the pediatrician who saw the child. The history and all aspects of the study and the recommendations are herein summarized. This letter, together with four copies of the reports is sent to the Division for Crippled Children for appropriate distribution to county health departments, education, physicians, or other community persons or agencies closely interested or involved with the management of the child.

Follow-ups are often recommended in from six months to two years after the initial evaluation. The center is responsible for making follow-up appointments for these patients, and on return, they have a physical or psychological examination or both, coupled with further counseling and appointments with consultants if needed. A follow-up note is forwarded in the same manner as the initial report.

Comments on the Central Diagnostic and Evaluation Centers

While the comments on the pattern of operation used in the two Centers are the outgrowth of visitations and conferences with staff members of the Centers, of at least equal importance is the manner in which those who look toward the Centers for services view the operations. In order that the committee might better understand the attitudes of parents and professional workers of the state, members of the Maryland Joint Committee on Services for Handicapped Children were asked to solicit reactions from persons working in their own fields. Questions were asked of county public health officers, public health nurses, parents of handicapped children, pupil personnel workers of the public schools, special educators, voluntary agency workers, vocational rehabilitation personnel, mental hygiene workers, and welfare workers. An effort was made to obtain reactions from all persons who might call upon the Centers for assistance in organizing services for the handicapped. Although not all groups were asked the very same questions, a similar pattern of questioning was used with each group. These reactions are summarized under Method of Operation at the conclusion of the paper.

Position Statements Regarding the Planning of a Diagnostic and Rehabilitation Center for Handicapped Children

Philosophy - Basic to any operation is a statement of philosophy which describes the reason and plan for the organization of the service. A representative statement of philosophy might be that the evaluation of the handicapped child requires a multi-discipline approach since many children with impaired function in one organ have impaired function in another organ or system, and until studied, the presence of multiple defects cannot be ascertained. Likewise, in the treatment of such patients the services of professional personnel with differing orientation are required for the optimal care of the child and advice to the family. Such a broad approach can be obtained with reasonable economy only if a broad range of specific disorders is covered.

A diagnostic and evaluation center would provide a central facility in which numerous special services would be available without the need of sending a child from one clinic to another, rescheduling return visits, delays in some services, and absence of others. This organization would remove the necessity for shuttling a child from one specialty clinic to another with no one taking the final responsibility for laying out a program of total care for the child.

The influence of the diagnostic and evaluation center could spread to all parts of the state by means of its consultation services, its involvement of staff representatives from cooperating disciplines in case conferences and follow-up case reviews, and through the training of personnel for various services for persons with handicaps. It is important that the center be family oriented rather than patient oriented.

Admissions - The rate and procedures for admissions should be controlled by the administrative officer of the center. The quality of service can best be maintained if the caseload is limited by one who is familiar with all aspects of the evaluative and rehabilitative process. The procedure for admission should make realistic requirements of referring agencies so that only that which is necessary to the diagnostic process is collected in advance of appointment dates. If referring agencies could be educated to the point that certain information would be provided to the center before examinations could be requested, the delays which have been experienced at the two Maryland centers could be shortened.

It is important that the diagnostic and evaluation centers be reserved for the multi- or complex handicaps with those persons with single handicaps being referred to other diagnostic facilities.

Aims and Services - The purpose of the center would be as follows:

1. Detailed evaluation of each handicapped child by all appropriate specialties
2. Planning of intensive program of rehabilitation using the best available techniques and experimenting with new ones
3. Observation of the results of the intensive program in order to (a) evaluate its usefulness, and (b) recommend long-term care of each patient. (In some instances this will be carried through at the center; in others, in the local community.)
4. Teaching medical students -- residents in pediatrics, neurology, psychiatry and physical medicine; psychologists; physical therapists; speech therapists, etc.
5. Education and training of parents in attitudes and techniques in the care of their handicapped child by orientation, as well as specific person-to-person demonstrations as in physiotherapy.

Type of Patient - Children scheduled would have difficulties such as the following:

1. Cerebral palsy, muscular dystrophy, and other chronic motor handicapping

disorders
2. Mental deficiency
3. Chronic emotional problems
4. Communication problems - hearing and speech handicaps, vision defects, aphasias, and specific educational problems such as reading handicaps.

With respect to Group One the goal would be largely that of determining what can be accomplished by an intensive program of physical therapy, prosthetic devices, exercises, etc., probably at first as hospitalized in-patients or day-patients when feasible. With respect to Group Two, the need for a central facility for diagnostic evaluation is a great one. Needed even more acutely is a facility for the sustained support for chronic patients and family. This sustained contact would enable an evaluation of the best program for education and treatment, not just for the immediate crisis but over the course of school life and thereafter. With respect to Group Three, the short-term problems now treated in out-patient clinics would be excluded, and focus would be on the long-term hospitalization for the severely disturbed in order to plan for future care (whether residential center, foster home, or custodial care). With respect to Group Four,the program, in addition to its diagnostic contribution, would provide an opportunity for the assessment of remedial measures and the development of new approaches.

This group of patients will quite possibly be a major sized group, and since diagnostic findings must be translated into education action, the permanent participation of a special educator in the various steps of the evaluative procedure is recommended.

Physical Plant - The housing of the center should be such that it facilitates rather than limits the performance of professional responsibility. In addition to examination rooms, observation rooms, treatment facilities and housing for patients, office space for the administrative staff, secretarial services, records, etc., will be required.

Location - The Investigating Committees of the Maryland Joint Agencies suggested that there are many advantages to be obtained where centers are located within the boundaries of medical training centers or hospitals. Such locations suggested the following possible advantages:

1. Accessible diagnostic facilities of all kinds without duplication
2. Accessible auxiliary facilities, record room treatment facilities, physiotherapy, etc.
3. Convenience and economy of time of research workers, in terms of facilities, opportunities for consultation, etc.
4. Convenience and economy of time of medical staff and students.

It was suggested that the quality of teaching and research deteriorate almost in direct proportion to the distance from the university medical center. To prevent these locations from having serious disadvantages for patients who live at a distance from the center, arrangements might be made to provide a single domiciliary type of care for in-patients. This type of housing would prove less costly than general in-patient hospital care and could involve extensive use of voluntary services.

It must be noted that little time has been available for research purposes. Staff members have been so busy with their work with patients that research problems have been identified, but not studied.

Fiscal Consideration - The Maryland plan by which the Crippled Children's Division of the Maryland State Department of Health purchases services of the two schools of medicine has proven effective, but it may require some modification.

It is important that the rate of charges for services be set at a realistic level so that no child with need will be denied necessary services. If possible, governmental funds should be obtained in order that all necessary services might be provided and all patients

with need included.
Staff

1. Administrative head. The training, experience, personality, and philosophy of the administrative officer of the clinic is of utmost importance. In identifying the particular persons for this responsibility, one may want to keep in mind the purposes of the center. If the basic consideration is diagnosis, quite possibly the administrative officer should be a physician, preferably a pediatrician interested in the problems of chronic disease. If the major emphasis of the clinic is to be on rehabilitation, then the administrative officer might well be one who is medically oriented but whose basic preparation is in a related field of professional preparation.

In the experience of the two centers of Maryland, the vast majority of the children referred have been mentally deficient or children with communicative disorders. The question is raised with regard to the necessary competencies of the administrative officer which might best assist in organizing a meaningful treatment and rehabilitation program.

2. Administrative assistant. A contributing factor to the problem one was able to locate in the two centers in Maryland was the requirement that the administrative officer serve not only in his professional capacity as a member of the diagnostic team but that he was also assuming the responsibility for the operation of the center. The many demands upon this officer limits his availability to both professionals of the community and the general public. In some instances this has resulted in less than desirable public relations. The employ of an administrative assistant could improve the public image of the center and its services.

It was noted that at one of the centers there have been four changes in the position of administrative assistant in four and one-half years. This turnover in staff appears to relate to the poor salary scale at that center. Similar changes in staff members with other responsibilities has posed a major problem. Work requirements and salaries must be commensurate with the professional requirements of an assignment and competitive with other activities seeking the employ of similar personnel.

3. Consultants

Internist

Neurologist

Physiatrist

Psychiatrist

Physical Medicine

Orthopedics

Allergy

Dental

Educational Consultant

Audiologist

Electroencephalographer

Ophthalmologist

Plastic Surgeon

Laboratory Technicians

Nurses

Physiotherapist

Psychologist

Secretarial position

Social Worker

Speech Pathologist

Laboratory Facilities

1. Small clinical laboratory for routine studies of blood and urine (refer to main hospital laboratory for more complete work-up)
2. Audiology center
3. Diagnostic X-ray
4. EEG laboratory

[illegible]. Experimental laboratories of the department of pediatrics would be valuable in the research and diagnostic aspects of the unit.
    a. Biochemical

Method of Operation - If one were to incorporate the various reactions of professional workers of the State of Maryland into an operational pattern, the following would be suggested:

1. Service would be limited to children with multiple or complex handicaps.

2. All initial requests for appointments would be accompanied by all necessary and available data.

3. A shorter examination day would be organized so that the younger children in particular would not be exhausted by the process.

4. The examinations would be scheduled within a shorter time period.

5. Parents should be kept informed on findings. If possible, a representative of the referring office should sit in on the conference with the parents.

6. All persons who participate in the evaluative process should also be party to the case staffing. Reports to agencies and parents should not be segmented but presented as result of consultation among the participating disciplines.

7. Either a representative of the community or someone who is familiar with treatment or rehabilitation possibilities of the home community of the patient should participate in the final case staffing session.

8. A regular reporting procedure should be established whereby agencies report back to the centers on what has happened with patients on whom work-ups have been done.

9. Children should not be treated in isolation but as members of a family.

10. When practical, centers should provide a statement which includes recommendations which should be put into effect immediately upon completion of the evaluations.

11. Close working relationships should exist between diagnostic sections of the center and those charged with treatment.

12. The administrative officer of the center or his assistant should be available to agencies and professionals of the region to which service is offered.

Harrie M. Selznick, Director of Special Education, Baltimore Board of Education, Maryland

RESEARCH OF THE PHYSICALLY HANDICAPPED -- REACTIONS

Raphael M. Simches

When I was approached and accepted the assignment to talk about recent research involving physically handicapped children, I did so without fully appreciating the task that lay ahead of me. With the present proliferation of research spurred by the impact of federal funds funneled through many government agencies as well as funds that are available through private agencies dedicated to the development and promotion of projects concerned with specific disabilities plus the number of research studies that are stimulated by the requirements for doctoral degrees, I have given up in despair of being able to pilot a reasonable course through professional journals and indexes.

Fortunately, the problem of reviewing research has been done most adequately, as witnessed in the recent issue of the Review of Educational Research which was concerned with the education of exceptional children. In addition, many of the previous sessions of this conference have dealt with the current research. So, in order to avoid repetition as well as avoid spending time discussing studies that are available for your review and reaction in the publication to which I just referred, I would like to spend the time alloted to me to discuss reactions to research in the field of the physically handicapped.

As one who is identified with the administration of programs of special education dealing with physically handicapped children, I consider research findings and research studies very important. For it is through research that we can hopefully expect our fund of knowledge to be extended to provide the innovations that are necessary to increase the efficiency of our special education programs, the quality of teaching, provide insights into the learning processes, and at the same time maintain the stability of the old and incorporate the innovations of the new. It is through research findings that we can overcome the resistance to change and not only clarify the virtue of what we have but also point to the direction in which we should travel. As with industry, the schools of tomorrow will be measured in part by the amount of money, time, and effort that are put into the activities that can be labeled research and development. The federal government today has been taking a very active interest in all areas of research. Aside from the monies that are available for research under the Public Health Service, which includes the various components of the National Institutes of Health, there are the programs that can be sponsored through the Office of Vocational Rehabilitation, the Cooperative Research Programs and the various research programs that are part of the National Defense Education Act. For those of us in the field concerned with research findings and their implementation, it is a monumental task to maintain the necessary communication lines with the sponsors of research so that we may be in a position to benefit from some of the findings. How many research papers that were conceived in the pursuit of doctoral degrees underwritten by foundations or underwritten by public agencies are sitting on shelves or in the filing cabinets? Are there "penicillins" that have been discovered by our researchers in the field of the physically handicapped that must lie in disuse because of inadequate lines of communication and the lack of resources that can be used for demonstrations or implementation of research findings?

A logical question one might ask is, "What are some of the expressions concerning research in the field of the physically handicapped at the present time?"

Frances Connor and Ignacy Goldberg, in the Review of Educational Research, December, 1959, pointed out that "the quality of research design and analysis continued to suffer from inadequacy of size and selection of both subjects and controls, lack of consideration of multiplicity and complexity of variables (particularly in the social structure), and isolation without relationship to findings of other studies. There is a tendency to neglect theoretical research and to concentrate on immediate practical problems. Too often the findings are too inconclusive to warrant wide application. Seldom are they repeated and related to each other."

Author Jacob Hunt who reviewed the research dealing with children with crippling conditions and special health problems in the February, 1963, issue of Review of Educational Research reinforces the point of view expressed three years previously by Connor and Goldberg, "It must be obvious that very little research is being done related to the basic learning and curriculum problems of the physically handicapped." Hunt hypothesizes that the limited amount of research appearing in literature during the three year period from December 1959 through February 1963 in the area of children with crippling conditions and special health problems suggests that research is needed on a broad front rather than on a few topics to fill certain gaps. The research that is concerned with studies involving teaching methods and comparable group techniques seems to be subject to considerable question because of the so-called "Hawthorne Effect." An excellent review of the problems relating to the "Hawthorne Effect" on research can be found in the December 1962 issue of the Phi Delta Kappan.

Another problem that the unsophisticated reader of research has to contend with is the apparent controversial nature of some of the findings of the studies that are being conducted. For an example, a study was reported in one of the professional journals in May of 1961 dealing with the integration of deaf children in regular classes. The reader of the reported study might have been quite satisfied with the results if he did not happen to chance upon another professional journal which reviewed the study in March of 1963. In reporting on this study in 1963 the reviewer stated, "In evaluating the study a number of methodological shortcomings mitigate the meaningfulness of the results. First, the absence of matched control groups of residential and segregated deaf day students eliminates the most desirable bases for comparison of performance with integrated students. Second, the selection of 21 subjects from the total sample of 52 available subjects could have resulted in significant sampling errors. Finally, the factors of emotional adjustment and social maturity were not controlled in the selection of subjects."

I suspect there are many other research findings that have been dealt with in this manner. From the above evidence one gets the feeling that present educational research that is being conducted in the field of the physically handicapped is doing little to improve educational practice or to provide knowledges and insights which will directly affect programs for the handicapped.

It is questionable, however, that the present status of research is as foreboding as one might infer from the reading of the publications previously referred to. I am somewhat hesitant about singling out studies and placing a value judgment on them since I am certain there will be someone who will take an opposite point of view. However, throwing caution to the wind, I feel there has been some research in the fields of both medicine and education which is significant in that it points out the direction for future areas of exploration.

In the field of medical research, with respect to physically handicapped children, the isolation of the german measles virus recently is one of the most significant discoveries of the past decade. The isolation of the german measles virus and its eventual control hopefully will be one more step toward the prevention of cerebral palsy.

In the field of research dealing with what I prefer to call instrumentation, the work that is being done at the Human Resources Foundation of Albertson, Long Island under the sponsorship of OVR is of particular import. As a result of recent advances in space medicine and in electronic telemetering, the Human Resources Foundation personnel have developed a transistorized transmitter about the size of a cigarette package which can pick up eight physiological modalities including galvanic skin response, body temperature, respiratory rate and depth, heart rate, pulse rate, and skin temperature. All of the above can be simultaneously recorded while the subject is working. There is no need for any internal cavity probes. No plug-in to an electrical circuit is necessary, and there is no interference with the daily activities. The information is transmitted over a regular F. M. Channel and is picked up by a receiver and directed into a data processing operation. I believe this type of electronic instrumentation has tremendous implications for future educational research, especially if it provides the opportunity to measure and assess some of the physiological components of behavior. Can you imagine the wealth of information that could be obtained through the teaching day? The possibility of studies dealing with motivation, anxiety, and other affective states which influence learning should open many new frontiers in the various concepts concerned with the problem of how children learn.

A completed study under this general area of instrumentation was the development of reading test norms for deaf children. In the study, conducted by the Bureau of Educational Research, New York City Board of Education, seventy-three schools, involving 5307 pupils, were used. The development of reading test norms for deaf children is an attempt to meet the request of many educators who are looking for norms so that physically handicapped children may be measured in terms of their own norms rather than in comparison with the norms that have been established for normal children.

There have been many studies in the field of the physically handicapped which I refer to as actuarial studies. This type of research, I think, is similar to the work being done by insurance companies who tabulate the chance possibilities that at age 65 one will or will not be bald, have impaired hearing, be on a third round of teeth, or that those living past 40 will probably live X numbers of years having X types of disabilities. I think these actuarial studies have become very popular and are for the most part descriptive in nature, providing little in the way of concepts that have universal application. Of the many actuarial studies the one that has implications for us concerned with the education of physically handicapped children was the analysis of children registered with the American Printing House for the Blind in January 1960, which was reported by the U.S. Department of Health, Education and Welfare, Bulletin No. 24, 1961, in the study, "Blind Children -- Degree of Vision, Mode of Reading." Of 14,125 legally blind children registered with the American Printing House, less than 25 percent are totally blind; more that 60 percent have sufficient vision to be of practical use in instructional programming. More than 80 percent of the children with 20/200 visual acuity use print as their primary mode of reading. Some values of this report are in the stimulation it may provide for new thinking and planning for children who have useful vision. It also points out the lack of agreement existing among administrators in regard to the definition by which children are to be considered blind for educational purposes and the lack of systematic approaches by those who are concerned with the utilization of low vision lenses in the education of blind children.

Studies of a longitudinal nature dealing with physically handicapped children in time will provide a great source of valuable information. A completed study which was conducted by the Bureau of Educational Research of the New York City Board of Education dealt with adolescents with cardiac limitations. The study was concerned with pupils with cardiac limitations in the sixth, seventh, and eighth grades. These children were studied for a period of four years. One of the many conclusions of the study indicates that cardiac illness per se was not related to any of the personality traits investigated. In the few students where marked personality disturbances were discovered, there was no evidence to indicate they were a result of cardiac illness. I think the worth of the study is that it illustrates the techniques that can be used on the part of school districts in the development of longitudinal studies involving physically handicapped children.

The value of carefully planned experimentation with children in actual schoolroom situations is that it can lead to immediate improvement of the methods and materials utilized in instruction. Research projects in public schools, therefore, that are well planned by the researchers and supported as a result of understanding and knowledge by the special class teachers and the members of the boards of education are one direction which can lead to the improvement of quality programs for physically handicapped children.

Research dealing with teaching environments for the most part has been concerned with different teaching methodologies and at the present time is concerned with programmed learning. However, studies which take advantage of some of the advances made in the field of electronics are those attempting to evaluate the effectiveness of using individual binaural hearing aids in conjunction with the induction loop system in the education of deaf children. European schools for the deaf have been working with induction loop systems for some time. The New York City Board of Education at the present time is engaged in a study involving the induction loop system. The induction loop is an electronic system of amplification believed to be especially helpful in auditory training for the deaf child. It is used to: (a) Stimulate and utilize any residuum of hearing of young children without curtailment of their movement about the room; (b) Eliminate extraneous noises that normally interfere with the peak efficiency of ordinary individual aids or standard group aids; and (c) Bring the teacher's voice directly to the child's ears in any part of the room without loss of amplification. The specific problems that are being investigated in this study being conducted by the New York City Board of Education are: (a) Is this system helpful in the education of all deaf children; (b) In which type of hearing loss is the induction loop system found to be most helpful; (c) What is the relationship between threshold of hearing and response on the induction loop; (d) In what areas of the school building other than the classroom would the loop be helpful; and (e) How can certain mechanical problems best be solved? The results of this research, no doubt, will have their effect on the education of the deaf throughout the country.

If we are to become more effective in our research efforts in the field of the physically handicapped, we must recognize and deal with certain considerations. I would like to talk briefly to those points.

It is important that there is controversy concerning various research projects. There is a place for the "loyal opposition," and a function of the "loyal opposition" in special education should be to suggest problems for research and to provide the critique concerning the results of research. How this is to be done is a difficult problem. Certainly several of the professional journals are doing this based upon individual interests. One organized attempt in this direction is the *Research Abstracts and Analytical Review* published by the Department of Audiovisual Instruction in cooperation with the Department of Health, Education, and Welfare, U.S. Office of Education. This review is limited to completed projects under the National Defense Education Act, Title VII. Perhaps the journal, *Exceptional Children*, should create an advisory committee comprised of knowledgeable people whose function it will be to provide on a continuous basis an analytical review and critique of current research.

There is a wide gap between what is known as a result of research and what is applied. Some steps should be taken to facilitate the process so that research findings can be made available to teachers and other practitioners in usable form. Unless new concepts and practices as they are proven can be disseminated, explained, implemented, and put to use more rapidly, progress and change will not receive the kind of vigor and stimulation they need. The gap between what is known and what is applied is expanding rather than contracting.

Our research studies seem to be too specific in terms of disability categories. One has the feeling that in many studies the only thing changed is the category of disability -- as if someone had said, "Here's a study that was done for the mentally retarded; let's substitute the word cerebral palsy." Shouldn't consideration be given to research whose findings will have a universality in terms of all physically handicapped children as well as research that involves multidisciplinary principles? Can we in our research begin to think of "handicapping syndromes" that may be present regardless of the type of physical disability? Is there a "handicapping syndrome" that is characteristic of the deaf, the blind, the orthopedically handicapped, the cerebral palsied? Can we do more in probing the commonalities of handicapped people regardless of their disability? Also, I do not believe we should ignore the value of empirical studies. Empirical studies under certain conditions have value because they can demonstrate daily the validity of certain techniques.

Consideration must be given to the role the federal government is playing and undoubtedly will continue to play in research projects for the physically handicapped. At the present time the uncoordinated efforts of the federal government suggest the possibility for duplication as well as a form of mild seduction. Are there certain research projects that are being put to one side and others developed because of the availability of federal funds? One wonders whether there is an over-all planning and continuity of research efforts on the part of many federal agencies now sponsoring research. As of last month, there were only six research projects for the physically handicapped under Title VII of the National Defense Education Act. Five of these projects were in the field of the deaf and one in the field of the blind. Of the five in the field of the deaf, two projects involved a college for the deaf and two projects involved one university. One cannot help but wonder at the limited number of grants, since educational media are very important aspects of programs for physically handicapped children, as well as the lack of involvement of public school systems in the research projects.

Would it be feasible to have a National Institute of Research and Implementation? I think such a concentration and centralization of both federal funds and staff would provide for a continuity of research that would have direction and planning and in addition provide for a more effective use of existing funds and personnel.

Quality education for physically handicapped children demands research. We cannot permit ourselves the luxury of assuming validity based solely on tradition. If we are to have valid research and if we are to deal with the various criticisms that are being leveled at educational research in general and at some of the research that has occurred in the area of the physically handicapped, we must pay greater respect to meeting the stringent demands of research design and stress the quality of research rather than the quantity of research. The results of research should enable us to deal with today's realities and provide the hope that we look forward to in the tomorrows.

Raphael F. Simches, Chief, Bureau for
Physically Handicapped Children, State Edu-
cation Department, Albany, New York

PROGRAM EVALUATION FOR THE GIFTED: MANDATES

Grace M. Smith

Evaluation is a process of measuring growth toward the achievement of certain clearly defined goals. It is a deliberate means of comparing results with expectations. The evaluation of any educational program is a difficult matter. It involves the ascertaining of values gained by individuals and groups; it determines the nature of resultant reactions and behavior changes, thus formulating the basis for justifying or rejecting certain proposals or practices.

The basic postulates in program evaluation for gifted children may be stated briefly as follows:

> Evaluation procedures must be planned from the inception of the program and in line with the objectives for the program.
>
> Evaluation must be a systematic and continuous effort to determine effective practices and to indicate needed improvements in all phases of a program.
>
> Evaluation plans should involve qualified key staff personnel as well as consultants from outside sources.

Sound, comprehensive, evaluative procedures are necessary in order to determine adequate answers to questions regarding the effectiveness of special programs for gifted children and youth. How else can one determine the answers to such questions as these:

- Are the specific and ultimate goals of the program being achieved?
- Have criteria for identification and selection been carefully followed?
- Has the program been accepted by students, teachers, parents, and community?
- Is there evidence that the program has made a difference by motivating and challenging the students?

- Has the program had beneficial effects toward the personal and social development of students?

- Are the instructional methods and materials adequate and effective?

- Are the counseling techniques effective?

- Is the general climate of the school conducive to the achievement of the proposed goals?

- Is the instructional program designed in recognition of the learning characteristics of gifted children?

- Do curriculum offerings meet the demands of a changing society?

- Does the program provide for adequate record keeping with the transfer of records as the program progresses?

- Are the students given an opportunity to participate in the planning and the evaluation of the school program?

- Is there proper articulation between schools and between school levels, that is, between elementary and junior high and between high school and college?

- Have teachers sought inservice improvement?

The answers to these and other questions when carefully assessed serve a broad range of purposes and open avenues toward refinement and improvement of the total program.

Study of the literature, observation, and experience convince one that there are substantial weaknesses currently in operation in evaluative processes in a great number of school divisions. Many of these weaknesses could be eliminated if the following practices prevailed:

1. The practice of planning the evaluation procedures at the same time that all other phases of the program are planned. This would eliminate the weakness inherent in evaluation as an afterthought.

2. The practice of evaluating what is taking place within the presently participating children, teachers, parents, and community rather than limiting the procedures to a follow-up study on those who have entered college. While the latter plan has value, it should not supersede the study of what is happening here and now in the local school system.

3. The practice of designing evaluative procedures on a longitudinal basis, that is, planning for a study of sequential program development as well as for the program immediately at hand.

4. The practice of including qualified personnel trained in the education of the gifted and well acquainted with research techniques. Many small school divisions will lack a staff trained for research, but most of them are within the reach of state colleges, universities, and departments of education which can give them help in this particular endeavor.

5. The practice of using various tools for measuring the effectiveness of special programs for the gifted rather than using standardized tests alone. When standardized tests alone are used, the true values gained from participation in such programs are not always adequately measured. Standardized

achievement tests, as presently developed, do not have the latitude needed to determine growth in relation to participation in special programs. Gifted children are frequently achieving well above their chronological age and actual grade placement prior to their experience in the gifted program. Therefore, they have reached the ceiling on tests standardized for their age and grade level. It is apparent, therefore, that both subjective and objective data be compiled for evaluative purposes.

6. The practice of attempting to determine through various media the growth in the development of originality, creative thinking, leadership ability, problem solving techniques, critical thinking, self-direction, and communicative skills. While these abilities may not be adequately assessed, at least some effort should be made in this direction. A competent group at the local level might develop instruments to be used in the collecting of the desired data. Various kinds of self-evaluation forms, surveys regarding personal attitudes, social relationships, and similar tools could prove helpful in comprehensive evaluative studies.

   Samples of various types of survey forms may be found in the literature concerning programs for gifted children. For example, the bulletin published by the Portland Public Schools entitled, The Gifted Child in Portland -- A Report of Five Years of Experience in Developing Programs for Children of Exceptional Endowment (1959). Similar questionnaires occur in the appendix of the bulletin prepared by the California State Department of Education entitled, Educational Programs for Gifted Pupils (1961).

7. The practice of holding inservice training sessions designed to assist staff members in the interpretation of evaluative data and ways of using such data effectively.

8. The practice of involving all segments of the school personnel, parents, lay people, college consultants, and psychologists in total evaluation is preferable to the practice of involving only those immediately attached to the school concerned.

A brief addendum to what has already been stated may give added strength to the mandates in favor of comprehensive evaluation. It must be acknowledged that changes in programming, especially changes involving structure and curriculum, are frequently accompanied by deep concern on the part of those who are responsible for changes. Valid evaluation results provide data which support reasons for defending or rejecting certain changes or proposals, thus providing a certain psychological security to the school staff and others involved.

We must admit that changes in educational policies and practices are much too slow to materialize. We surely agree that it is somewhat illogical to be an intrenched defender of what one does merely because he does it that way and has done it that way for a long time. It is more logical to seek better ways of effecting any program no matter how long it has been routinized. Deep-searching evaluative processes open the doorway to the question, "How long since a new idea or a major innovation has been tried?" Why not have an "idea session" where nothing is allowed to come up but possible solutions to the problem? Ideas submitted may be "dissected" at a later meeting.

The thoughts just added are a way of saying that evaluation is not only a "mandate" in the process of assessing what is now being done, but evaluation is also the key that unlocks new ideas and stimulates advancement in educational practices.

Grace M. Smith, Assistant Supervisor, Special
Education Service, State Department of Education, Richmond, Virginia

REHABILITATING THE PHYSICALLY HANDICAPPED COLLEGE STUDENT -- A DEAF-BLIND STUDENT'S POINT OF VIEW

Robert J. Smithdas

It is most gratifying and inspiring to realize that, during the course of the past 15 or 20 years, a growing number of physically handicapped students has enrolled in various areas of higher education. Their presence in our colleges and universities throughout the country seems to indicate that, generally speaking, a physical handicap is no real deterrent to normal ambition and the desire to develop latent abilities and talents. Many students have graduated into technical and professional fields where their achievements have been notable contributions to our society.

The large number of visually handicapped and totally blind students now enrolled in college programs is clear evidence that handicapped persons are being widely accepted everywhere. In a recent report from one of our leading residential schools for the blind (Perkins School for the Blind, Watertown, Massachusetts), no less than 40 graduates and former students are currently engaged in a wide range of college studies. The fact that physically handicapped students have been able to win recognition on the basis of merit and ability is indeed encouraging; it points the way to greater opportunities for others in the near future.

Rehabilitation and counseling services maintained by the states and by private agencies have been of inestimable value in making this possible. By providing financial help, advice, and professional guidance, these services have enabled students to attain their degrees with a maximum of success and a minimum of difficulty. In addition, many institutions of higher learning have appointed members of their faculties to act as special advisors, thus giving handicapped students further assistance on their immediate campuses.

One aspect of the present education of physically handicapped college students is particularly noteworthy. During the past 15 years, four students, all afflicted with the double handicap of deafness and blindness, have completed their college studies and obtained qualified degrees. Three of these students are actively employed by different agencies, while the fourth is continuing his studies in mathematics on a postgraduate level. Despite the obvious severity of their handicaps, three of these students have been able to win their degrees with high honors, and all of them have established records of high scholastic achievement.

It is interesting to consider that from the time of Helen Keller's matriculation as a college student at Radcliffe, an interval of 50 years elapsed before another deaf-blind person was admitted into a college curriculum. Such a period of years represents a full generation, and the fact that over a short period of time four students, similarly handicapped, have been able to complete college work becomes more impressive. Much credit for this achievement is due to the present availability and flexibility of rehabilitation services, as well as to the outstanding efforts of the students themselves.

Being the first deaf-blind student after Helen Keller to undertake college studies, my own matriculation at St. John's University was largely viewed as an experiment to determine whether persons with the double handicap of deafness and blindness could successfully complete a full college curriculum. This experiment was made possible under the auspicies of the Industrial Home for the Blind, Brooklyn, New York and the New York State Office of Vocational Rehabilitation. Guided by these two agencies and stimulated by their unfailing interest and encouragement, and also inspired by the example and pioneer spirit of Helen Keller, my four years of studies proved no more difficult than they would be for the average college student. At that time no one could foresee that such an experiment if successful would eventually stimulate other deaf-blind students to enter college work.

Our visually handicapped students in college have had the advantage of being able to use several kinds of study tools. Braille textbooks and tape recorded textbooks as well as the services of volunteer readers have been extremely helpful to them. Braille has also been an indispensable medium of study for deaf-blind students; in fact, it has been their main avenue for receiving nearly all information relative to their courses. Equally indispensable have been the student companions who sat beside them during lectures in the classroom, interpreting the discussions by use of the manual alphabet for the deaf. These student companions unquestionably contribute -- through their dedication and patience -- a great deal to the eventual success of the deaf-blind students' collegiate career.

John Spainer who was my companion during my baccalaureate years at St. John's University and later while I was studying for my master's degree at New York University is a wonderful example of how a normal student can help a deaf-blind student. He sat beside me throughout all my college courses, relaying the highlights of lectures, as well as taking notes which he transcribed into Braille for me during his free hours. He was also with me at many social functions -- particularly those which were connected with the literary fraternity which we joined. He developed an amazing dexterity in using the manual alphabet for the deaf, and he also became proficient in writing Braille. Often, when a textbook was unavoidably delayed in being transcribed and when the material was urgently needed before examinations, he was able to supply the necessary pages in time. It would not be far from the truth, in fact, to say that my dependence upon him was very real and that a large measure of my success academically was due to his unfailing assistance.

After my graduation from St. John's, when I entered the field of public relations as a staff member at the Industrial Home for the Blind, John Spainer became my assistant for several years. Though my dependence upon him eventually grew less, my esteem for him as a friend and fellow worker increased.

The organization of academic and social activities in college life has a very definite effect upon the thinking and personality of the physically handicapped student. In many cases, if the student has been taught in the environments of residential schools for the blind or in special classes in public school systems, his debut into a college career is quite likely to be his first real exposure to a world in which all his relationships will be with normal persons. For students who are sensitive about their handicaps and who feel self-conscious about them, this may be the first real stage of adjustment to normal environments.

A physical handicap is a disability, and a disability always makes an individual slightly different from other individuals. For the physically handicapped student to accept this difference himself and for other students to accept it is not always an easy task but one which is most essential to his integration.

I realized this fact early in my sophomore year at St. John's when students in my classes began to take a genuine interest in me as an individual. At first I was quite certain that their interest stemmed primarily from curiosity -- a quite natural thing, but I soon learned to understand that I was being accepted also as a distinct personality. This acceptance became more apparent and real when I was invited to join one of the school's fraternities as an active member. Through participation in the activities of the fraternity and by contacts with fellow students and their friends, the whole scope of my social life was broadened. This experience was invaluable to me later after leaving college, and I am sure that it has had an equally profound effect upon other handicapped students elsewhere.

College life holds a definite challenge for the physically handicapped student. The knowledge that he is preparing for the future of his adult years and the keen sense of competing in his studies with normal persons have the effect of maturing and broadening many of his concepts regarding the welfare of others and the world in which he must eventually take his place as a selfreliant citizen. Although it may make him acutely conscious of his own shortcomings as an individual, it also urges him to find ways and means of overcoming them. Possibly for the first time in his life, the meaning of maturity and stability will reach full importance to him.

It is of utmost importance that every physically handicapped student determine the eventual use to which he will apply his education and the accumulated knowledge which it has given him. Because of his handicap, he should seek a practical goal in some particular field where his ambitions can be fully realized and where his potential can best be utilized and developed. He should think realistically and constructively about his latent abilities and their relationship to his future plans. This point which I have mentioned -- the orientation of the student's education to a definite goal in some professional or technical area -- might very easily include all students in college, whether handicapped or not. But it should be stressed with special significance for all physically handicapped persons, considering that any disability invariably creates its own limitations, thus limiting the scope of activities which the handicapped person may find suitable to his needs.

For example, my own education was planned on broad lines, more or less oriented to the tentative possibility that I might join the public relations staff of the Industrial Home for the Blind after graduation. With this prospect in mind, I majored in English and philosophy. My master's degree, taken in Rehabilitation and Vocational Guidance of the Handicapped, was also tentatively oriented to the idea that I might later serve in helping deaf-blind clients in the process of rehabilitation.

The other two deaf-blind students who have graduated from college and who are now actively employed professionally appear to have had a similar experience. One of these persons is also engaged in public relations for an agency while also carrying on a part time schedule as an instructor in a correspondence school for the blind. The other is a home teacher in California, working under the state's program of social services for blind and deaf-blind clients. The deaf-blind student who is now taking post graduate studies in mathematics (and who has a limited amount of hearing with the use of a hearing aid) eventually hopes to become a programmer in electronics or some other field where his handicap will not necessarily be an impediment to success.

In stressing this issue, I am reminded of a young woman whom I met quite recently -- a deaf girl who is gradually losing her sight. She is presently attending college classes, majoring in dress designing. She is already aware that her vision is declining, yet she does not wish to change to a major in which her loss of sight might not have so strong an influence later in life. It would obviously be more realistic if she would alter her plans so that she might find other and more constructive interests.

Until new areas of achievement can be explored in which our physically handicapped students can find placement and full use for their abilities, they must certainly consider the areas which have already been opened and explored at the present. They should take cognizance of their limitations and orient their plans and ambitions to existing opportunities. It is not enough for a student to desire a college education if he will not eventually be able to use it by applying it realistically to an area where his capacities will be fully realized. This is particularly true today for deaf-blind persons contemplating college, for the field of opportunity seems especially limited for them.

In the past, many physically handicapped persons have demonstrated unusual courage and iniative in exploring new areas of accomplishment, proving that their handicaps could be turned into incentives rather than burdens. Rehabilitation as we know it today is still a comparatively young and growing science. It has already shown striking results in helping countless persons reach new heights of endeavor, and it is quite predictable that in the future, as its services and techniques are expanded, many more individuals will profit. The limitations which we know exist at the present will undoubtedly be pushed forward to new frontiers.

Perhaps this feeling is best summed up by a young man I met several years ago. While discussing blindness and its social status, he said to me: "I know my limitations and admit them; and I know my abilities, too -- but I have not discovered all my opportunities!" There is little doubt that the feeling he so eloquently expressed is shared by countless other physically handicapped people everywhere!

Robert J. Smithdas, Counselor, Public Information and Education Service, The Industrial Home for the Blind, New York City

RETENTION IN EDUCABLE RETARDED AND NORMAL SUBJECTS AS A FUNCTION OF AMOUNT OF ORIGINAL TRAINING

Glenn A. Vergason

The purpose of this study was to investigate whether two different criterion levels of training would produce differences in retention between retarded and normal subjects on paired associate learning. Sixty-four educable retardates and sixty-four normal public school children were assigned on a random basis to the treatment conditions. Each of these criterion conditions was composed of four groups of retarded and four groups of normal subjects with each group containing 16 subjects. The means and standard deviations were equivalent for CAs and were comparable for IQs within the subgroups of retarded and normal subjects.

The stimulus consisted of 13 randomly paired items from the Peabody Picture Vocabulary Test which were presented by an automatic slide projector. The method of adjusted learning was used to train subjects to either a minimum level of learning or until overlearning had occurred. In the method of adjusted learning an item is removed when the performance of that item reaches the criterion set for that particular group. The minimum level of performance was set at one correct anticipation of each item. The overlearned performance level was set at five correct anticipations of each item.

One half of the subjects who had been trained to each criterion were measured for retention by the relearning method after one day. The other one-half of the subjects who had been trained to each criterion were retained after a 30 day interval. Thus, there were the variables of time and amount of training for retarded and normal subjects.

An analysis of variance of trials to criterion on the original learning indicated that a hypothesis of equal learning rates in retarded and normal subjects could be accepted in this study. This was encouraging in that it showed that equal learning could occur with equal reinforcements which has been a disadvantage to certain studies in the literature. Since no significant differences were found between the rates on original learning for retarded and normal subjects, it was possible to conduct analyses for retention based on savings scores and absolute trials to relearn. The prediction had been made that where the minimum level of performance had been required, normal subjects would be superior to retarded subjects on retention. However, it was predicted that no differences would exist in the retention where overlearning level of performance had been employed. The analyses by both methods (savings scores and absolute trials) indicated that normal subjects had significantly better retention on the minimum and overlearned tasks after one day interval. At the 30 day interval both methods indicated that the normal subjects were superior to retarded subjects on the minimum performance tasks, but there was no significant difference on the overlearned task. Thus, the predictions of this study were supported except for the comparison of retention between retarded and normal subjects on the overlearned tasks after a one day interval. One possible explanation for this lack of equivalence at this level might be due to a differential reminiscence effect similar to that found by investigators of motor learning although there are perhaps many other explanations.

This study does demonstrate the importance of the role of overlearning in retention for retarded subjects and that over a fairly long period of time, retention can be sustained at a level equal to that of normal subjects if systematic overlearning has been employed. The implications for programmed instruction with retarded subjects seems quite evident and some more practical research along these lines is in the process now.

Glenn A. Vergason, Associate Professor of
Special Education, University of Alabama,
University

SCHOOL HEARING CONSERVATION PROGRAM: PERSPECTIVES IN THEORY AND PRACTICE

Eugene L. Walle

Hearing conservation programs for school age children consist of mass screening of large numbers followed by a test of hearing sensitivity for those with suspected hearing problems. Mass screening may be done by individual or group screening methods. Individual screening is more accurate but more costly. Identification audiometry in the school age population is best described in two steps. The first is screening audiometry. The second stage is a more detailed test by more highly trained personnel with more elaborate equipment. Its purpose is to lead to the identification of those who should be referred to an otologist or other physician for a complete diagnostic workup. Let us review the state laws, codes, and regulations pertaining to hearing testing in the public schools.

State Laws

An inspection of the laws cited in the House Document No. 154, 78th Congress, 1st Session, indicates that 13 states in the early 1940's had laws requiring a general physical examination of school children which could lead to an early discovery of hearing problems. Twenty states had laws which mentioned specifically the testing of hearing or the examination of the ear.

Harrington (1961) reported a tabulation of answers through questionnaire forms distributed to departments of health and departments of public instruction in each of the states inquiring whether the state had a compulsory law for the testing of hearing. Answers to this question revealed that 25 states appeared to have such a law. His careful study of the legal codes of each of the states revealed that of the 25 states which responded that they did have a hearing testing law, only 18 proved to have a law which mentioned specifically testing the function of hearing. The other seven states had general health laws which apparently had been interpreted to include the testing of hearing. The codes of all other states have been examined and reported to ascertain their provisions for the testing of hearing. Sixteen states have school health laws requiring a general physical examination which could include the testing of hearing. Inspection of the codes and the supplements to the codes indicate that a total of 22 states have laws which specifically require hearing testing.

In the majority of the states, the administrative responsibility for health examinations, including hearing testing, is placed with the departments of public instruction. In 16 states the department of health is charged with setting up or approving the criteria and standards to be used in the testing or health examinations. Cooperative programs also exist. Lohmann (1960) has described a cooperative effort between the Division of Special Education in the State Department of Public Instruction and the Division of Public Health Nursing in the State Health Department of Iowa. Representatives from each division formed a joint committee to work out the details of a guide that helped delineate the responsibilities and functions of special education supervisors and public health nurses relative to the hearing and vision conservation programs. The guide gives emphasis to the importance of clarifying among school personnel the respective roles of the various professional employees.

States having no law specifically requiring hearing testing do not necessarily indicate lack of a program. It is extremely difficult, if not impossible, to attempt to compare laws against programs from state to state to determine the kind of law which results in a good program. Our guidelines must be with the state recommendations and programs coming from the state's professional leadership.

The number of times hearing tests are administered, the criteria used in hearing screening, the practices with respect to follow-up in public school hearing conservation programs, and the personnel responsible for carrying out hearing conservation programs in the school system are the components in the laws, codes, and regulations that require close attention.

Hearing Testing

There is a difference of opinion in the number of times school children should be tested. Some feel the results in terms of referrals do not justify the time and expense involved. There are others who support periodic examinations. The expense argument is frequently raised in terms of the cost of the physician whereas hearing testing may use lay persons and a minimum of trained specialists. The consensus is that hearing should be tested annually. The National Committee on School Health Policies states that:

> Hearing tests should be given annually in elementary schools and every two years in secondary schools, preferably with a pure tone audiometer. Teachers, nurses or technicians with special preparation should give audiometer tests (1958).

In 1962 the American Hearing Society was requested to present its position on annual hearing testing of public school children at the National Advisory Committee Meeting on Health Supervision of the National Congress of Parents and Teachers Program for Continuous Health Supervision from Birth through High School. The following is a summary of a portion of the report:

> At our present reported knowledge, trends indicate that at least 50 percent of the national public school population is covered by audiometric testing services. Approximately 37 percent of these children are tested annually. The incidence of hearing impairment of the national public school population is generally accepted at four percent. Studies have been completed and reported as to techniques used in screening youngsters in the school population. A good audiometric testing program will find as much as 13 times as many children with hearing defects as other varied methods. The audiometric case finding methods are convincing proof of the value of hearing testing programs in the public schools. It has been our experience that hard of hearing children cannot be found except by statewide, countrywide and citywide testing programs. Ideally, the American Hearing Society hopes for annual hearing testing for every youngster in elementary and secondary grades (Walle, 1962).

Several excellent studies have been reported that certainly justify the long campaign of hearing conservation in the public schools. The Michigan State Department of Health (Walle, 1962) has figures which state that 65 percent of children receiving medical treatment had normal hearing a year later after losses had been detected in school hearing testing programs. Gardner (Walle, 1962) reported 58 percent of the children who saw physicians improved in hearing compared with 28 percent who improved without seeing physicians. Edmund Fowler, Sr. (Walle, 1962) has emphasized the fact that yearly hearing tests are clearly imperative. His extensive survey showed that 3.15 percent of elementary school pupils had impaired hearing. He estimated that 4.5 percent of the school population needed otological diagnosis and about 2.5 percent needed special educational assistance (lipreading and auditory training). Fowler also has reported that with 4,566 hard of hearing children receiving lipreading instruction, such training cut in half the number of grades repeated. Kodman (1960) recently reported the relative effectiveness of a four year hearing conservation program evaluated for four major factors. From a sample of 65,086 who received an individual audiometric examination, 1,984 pupils were referred for follow-up services. The needs of the hearing loss group were reviewed as medical, educational, social, and psychological. The results were encouraging since approximately 65 percent of the cases received medical or educational services. The unmet needs were predominantly social and psychological.

None of the state laws and regulations refer to hearing screening at the preschool level. In our own professional literature and from clinical experience, we have been made aware of an even greater incidence of hearing loss and associated problems in infants. The hearing problems may affect not only the peripheral ear mechanism but the complex hearing pathways and cortical centers. Years ago these babies with multiple problems including hearing loss would not have lived. They are with us because of advancements in obstetric and pediatric care. With our increased knowledge and more advanced skills and equipment, the American Hearing Society urged the inclusion of hearing on the Questionnaire for Parents of the National Advisory Committee of Health Supervision in the attempt to detect hearing loss in infants and, most important, to do something about such a problem if adequately assessed. At least two states are now conducting pilot projects for testing the hearing of preschool children. There exists, in my opinion, a great need to thoroughly assess the infrequency of medical referral of youngsters before school years. None of the state laws and regulations refer to hearing screening at the preschool level. Leadership in several states reflect positive action in this area. Leshin (1960) in accordance with increasing emphasis on early detection of hearing loss, described a pilot hearing conservation program involving 180 preschool children in seven Oregon counties. The highly significant incidence of medically referable hearing loss (21 percent) suggested the feasibility of enlarging the program of identification audiometry programs at the preschool age level. In Illinois, Bothwell (1961) describes new legislation providing for joint agreement between districts to unite into large geographical units. Administrators are encouraged to combine facilities so as to plan for a minimum of six classes from preschool through junior high.

At present the majority of hearing conservation programs in the public schools emphasize testing of early school age children with less emphasis on the testing of the high school student. Fourteen states require annual tests for their children of school age. Connecticut's law says every three years; Indiana's law requires testing grades 1, 4, 7, and 10; Maryland's law requires biennial tests; Vermont's law stipulates grades 1, 2, 3, 4, 5, 6, and 9. Patterns are too varied for generalizations. State leadership appears to be strongly in favor of annual testing.

Environment, Equipment, Personnel

Osborn (1961) and others have emphasized the fact that it is useless to carry out recommended identification audiometric procedure unless the results obtained can be assured to be valid. Reliability depends upon three important aspects: (a) the environment in which the testing is done; (b) the equipment used; and (c) the personnel operating the equipment. If there is a breakdown anywhere, the results of the program become meaningless. California, Indiana, Michigan, New York, and Pennsylvania laws state that an audiometer shall be used. Only California law specifies the audiometer must be approved by the Council on Physical Medicine and Rehabilitation of the AMA. Documented papers now call for equipment meeting the requirements established by the American Standards Association for limited frequency and diagnostic audiometry. Ideally, equipment should be properly calibrated and maintained. Independent regional calibration centers have been urged to be established where needed. Calibration checks of audiometers are recommended to be made after each four months of use and no less than once a year. Are these important responsibilities carried out?

None of the state laws include specific information for critical details such as frequencies to be tested. These specifics are left to an appropriate department -- in 16 states, the department of health. In state regulations, there is considerable uniformity on the criterion of decibel level. Twenty states use 15 db as the pass-fail criterion; three states use 20 db; and two states use 25 db. Twenty-six states report the use of a pure tone test; ten states indicated that a group test might be used. Three highly recommended the group pure tone test. Data from several states have been reported indicating that group testing is considerably less expensive than an individual screening program. In Michigan state costs for individual pure tone screening run between 25 and 35 cents per capita. Group pure tone screening run between 25 and 35 cents per capita. Group pure tone screening procedures involve a cost of between 15 and 17 cents per child. Osborn reports that relatively untrained technicians can do accurately between 70 and 80 individual sweep check hearing tests per day; through the use of group pure tone screening procedures, between 200 and 250 pupils can be tested per day with comparable accuracy when an adequately quiet testing environment can be achieved. There is no agreement on the frequencies to be used in the screening tests. One state recommended just two frequencies. Twenty-one states recommended a variety of frequencies; all used 500, 1000, 2000, and 4000 cps. Six thousand cps was omitted by 10 states; 10 states include 8000 cps and one included 12,000 cps. Criteria for referral to medical care appears to be uniform at failure to hear 20 db at two or more frequencies in one ear, or failure to hear 30 db at one frequency, or evidence of pathology of the ear.

Personnel Criteria

Hearing laws mention the use of a physician in 14 states but not in a mandatory sense. Thirteen states make it the responsibility of the teachers to test hearing. In 13 states, there are provisions that volunteers should be given training by nurses, by health department specialists, or by audiologists in the department responsible for the testing. Personnel at the screening level generally have a minimum of training; technicians for threshold testing are usually thoroughly trained persons.

The consultant personnel at the state level responsible for hearing testing are in the health departments in 24 states, in the special education division in 9 states, in the school health division in one state, and in the crippled children's service in education in one state. In the areas of hearing screening and threshold, only a few states attempt to spell out what constitutes adequate training.

The Pennsylvania Speech and Hearing Association has developed a committee on professional training. Members of the committee come from colleges and universities in Pennsylvania approved by the Department of Public Instruction. The committee has practical, realistic purposes and may be setting a pattern and standards from which other states could certainly benefit. The Pennsylvania Department of Health is now utilizing standards prepared in audiology and speech pathology for its public school and preschool programs.

Impetus

Connor (1961) in 1961 called for a national study of the hearing levels of preschool and school age children to improve treatment and preventive programs. He urged cooperative study among professionals in the hearing field which could result in standardization of testing conditions, equipment, terminology, and reporting. Medical, social, and educational justifications for identification audiometry appear to loom largest between the ages of 5 and 16 (American Speech and Hearing Association, 1961). The goal is to locate children who have even minimal hearing problems so that they can be referred for medical treatment of any active ear conditions discovered to be present and remedial educational procedures can be inaugurated at the earliest possible date. Eagles and Doerfler (1961) reported convincing evidence that a child can have a great decrease in hearing sensitivity shift, indicative of underlying pathology, without the decrease being detected by present identification audiometry. The die has been cast for transition.

Summary

State laws, codes, regulations, and leadership in the area of public school hearing conservation programs are certainly far from being uniform. Some very profound and far reaching studies and programs in this area have evolved, particularly in the past three to five years. Volunteer workers, nurses, teachers, audiometrists, administrators, physicians, audiologists, and technicians have done and are doing a remarkable job under present conditions where great differences exist in local programs, regulations, in equipment, and time and money available. We are, however, witnessing several specialized programs and development of standards across the country that will ultimately make many of our present day programs (criteria and personnel) obsolete. The transition will be slow but inevitable in the constant attempt to better serve the hearing and hearing handicapped child. The audiometric criteria in the nation's schools, although varying considerably and in some instances nonexistent, have produced thousands upon thousands of youngsters with improved hearing acuity or the tools by which they can function in this world of sound and constant babble of tongues. The audiometric criteria in school hearing conservation programs is a fact. As with any fact, it can be developed, expanded, and refined to crystalize even more our present knowledge on this profound and delicate organ of hearing.

References

American Speech and Hearing Association, Committee on Identification Audiometry, Hardy, W. G., Chairman. Identification audiometry. Journal of Speech and Hearing Disorders, 1961, Monograph Supplement No. 9.

Bothwell, H. (Illinois Dept. Education, Springfield). Illinois preschool program. Proceedings of American Instructors of the Deaf, 40, 1961, 240-244.

Connor, L. E. Determining the prevalence of hearing impaired children. Exceptional Children, 1961, Vol. 27, 337-339, 341-343

Eagles, E. L., and Doerfler, L. G. Hearing in Children: acoustic environment and auditory performance. Journal of Speech and Hearing Research, 1961, Vol. 4, 149-163.

Harrington, D. A. Laws and regulations in identification audiometry: directions and trends. Journal of Speech and Hearing Disorders, 1961, Monograph Supplement No. 9, 45-51.

Kodman, F. Hearing conservation. Archives of Otolaryngology, 1960, Vol. 75, 226-230.

Leshin, G. J. Preschool hearing conservation on a statewide basis. Journal of Speech and Hearing Disorders, 1960, Vol. 25, 346-348.

Lohmann, G. Hearing and vision conservation programs in Iowa schools. Nursing Outlook, 1960, Vol. 8, 684-685.

National Committee on School Health Policies. Suggested school health policies. (Third edition) Washington D. C.: Joint Committee on Health Problems in Education of the NEA and AMA, 1958.

Osborn, C. D. Identification audiometry for school age children: basic procedures. Journal of Speech and Hearing Disorders, 1961, Monograph Supplement No. 9.

Walle, E. L. Unpublished report to Chairman, National Advisory Committee on Health Supervision, National Congress of Parents and Teachers, October, 1962.

Eugene L. Walle, Director, Programs and
Services, American Hearing Society,
Washington, D. C.

MANDATES IN PROGRAMMING FOR THE GIFTED:
NATURE OF THE SYMPOSIUM

Virgil S. Ward

This symposium, as may be gathered from its unusual title, has been deliberately conceived as a series of pointed declarations on major aspects of differential education for gifted youth. It is our intention to present certain important generalized principles and convictions which resulted from engagement in the Southern Regional Project for Education of the Gifted. Respect for this occasion, however, and for this audience of professional workers and scientists, suggests that we state our reasons for adopting this mode of presentation. We would not wish to be misinterpreted as believing that what we believe is necessarily synonymous with "truth," nor again, as irresponsibly expressing mere personal preferences, likes, and dislikes born of accidental experience.

The privileged involvement in the SRPEG, a venture conceived by the Southern Regional Education Board and supported by the Carnegie Corporation of New York, provided 16 weeks of full-time study and travel, dispersed over approximately one full calendar year, with the exclusive aim of examining every major facet of this problem. The participating nine state department of education officials engaged in six weeks of seminars in a university setting, with lectures and consultation from nationally recognized authorities; and these weeks of study were interspersed with some ten weeks of travel in two-week long observation tours to prestigious institutions from the east coast to the west. This year (1960-61) of active study and travel was followed by independent intra-state organization for action within the local schools and by collective report writing. A number of you may be familiar with the formal project report issued last October and entitled, The Gifted Student: A Manual for Program Improvement, since copies were distributed free to members of The Association for the Gifted (TAG) through the cooperation of officers of the association.

It was this nature of the project design that apparently led to repeated suggestions from our consultants and advisory council that the sum of these observations be made a matter of record. We chose to do this not in now over-familiar form of pros and cons, but rather in the form of descriptive principles representing the best practices and the most adequate resolution of issues accomplished in the mainly mature and excellent programs which we observed. There is an urgent need for implementing what is known about the nurture of biological deposits of human talent. To generalize now upon what appears to be reliable and valid -- to declare some things good and others less so -- would seem to avoid sterility at the level of human judgment while deterring not in the least the necessary impartiality of ongoing scientific inquiry. The practical formulations which we offer here are thus hopefully intended to reduce the unseemly lag between theory and practice.

A word of acknowledgment will close this introduction. Each person presenting a paper today has been elected to his place by the project group as a whole, and each paper has been prepared out of a body of material submitted for the purpose by the group. Each panelist, though attempting to represent in the main the consensus of his colleagues has necessarily used his own form of expression and chosen to include and exclude certain points. Dissent on particulars is therefore in order among the project group as well as among our audience.

Virgil S. Ward, Director, Southern Regional
Project for Education of the Gifted, and
Professor of Education, University of
Virginia, Charlottesville

(Papers presented at this symposium are listed in the table of contents under the name of each person presenting a paper: Waitus R. Burris, Vernon L. Johnson, James H. Perry, John H. Sandberg, and Grace M. Smith.)

ATTITUDES OF UNIVERSITY FACULTY, ADMINISTRATORS, TEACHERS, SUPERVISORS, AND UNIVERSITY STUDENTS TOWARD THE GIFTED

Jean L. Wiener and Harriet E. O'Shea

(This paper appears in its entirety in Exceptional Children, December, 1963, Volume 30, Number 4. The summary included in the paper appears below.)

Summary

Questionnaires and attitude scales were administered by members of the Subcommittee on Attitudes toward the Gifted to 109 university faculty members, 127 administrators, 38 supervisors, 947 teachers and 450 university students. For the total group, the supervisors were the most favorable, followed by administrators, university faculty, and teachers, in that order. The university students were the least favorable of all the groups.

The most significant variables were degrees held, lectures on the gifted, classes for the gifted, teaching of the gifted, and class level. Teachers and administrators with higher degrees were more favorable than those with less education. Students who had participated in one or more lectures were more favorable than those who had not. Administrators who had classes for the gifted in their schools and teachers in charge of a class for the gifted were more favorable toward the gifted than those with no direct experience. Senior students were more favorable than sophomore and graduate students.

Jean L. Wiener, Director of Special Services,
El Segundo Unified School District, California,
and Harriet E. O'Shea, Associate Professor
of Psychology, Purdue University, Lafayette,
Indiana

HOW AN ASSOCIATION FOR RETARDED CHILDREN CAN HELP THE PUBLIC SCHOOL PROGRAM FOR THE RETARDED

William T. Wiest

As a representative of the Delaware Association for Retarded Children, I am speaking only for this association and not for other units of the National Association for Retarded Children throughout the country. I do believe, however, that the activities of the Delaware Association are fairly typical of those of many NARC units throughout the country, and I would suggest to those of you who are educators that you might look toward your local unit of NARC for the kind of support the Delaware Association tries to give the public schools in Delaware. In many cases you are probably already getting help from your NARC unit, but if you aren't I suggest you look more closely into the possibilities.

The Delaware Association for Retarded Children is concerned with the welfare of the approximately 14,000 mentally retarded people in our state. We work for the welfare of the mentally retarded of all ages and degrees of handicap, as well as for the prevention and amelioration of mental retardation whenever possible. Due to the great numbers of the retarded and the diversity of their needs, our policy is to work to procure adequate services for the retarded rather than providing them ourselves. As a rule, we provide direct services only through demonstration projects. Some of the broad areas with which we concern ourselves include research, diagnostic and evaluative services, public education, parent counseling and parent education, education of retarded children at all ability levels, vocational training and placement, recreation and leisure time activities, residential facilities, guardianships and trusts, recruitment of trained professional people into the field of mental retardation, and adequate laws and appropriations at the state and federal government levels.

The Delaware Association for Retarded Children is a relatively small agency with an annual budget of less than $60,000. Most of our financial support comes from the various united funds of Delaware. Our fulltime staff consists of two professionals and two secretaries. As is true of many voluntary agencies, our greatest asset is the group of sincere, able citizens who use our organization to donate untold hours of their time and talents to the cause of the mentally retarded. Some of these people are parents of retarded children; others are just civic-minded citizens who want to help.

Time would not permit my attempting to detail for you the diversity of activities engaged in by DARC. Therefore, I will restrict myself to our work in relation to the public schools.

DARC's Role of Assistance to the Schools

Some of the ways DARC works to help the public schools are through scholarship grants to teachers, sponsorship of in-service training programs, sponsorship of special projects, recruitment of teachers and volunteers, support in the school's legislative efforts, encouragement in expansion of program and experimentation and in parent acceptance and education.

Our scholarship grants are given to teachers actually on duty with retarded children who either need to take additional courses for full certification or who are fully certified but want to take enrichment courses in the field of education of the retarded. Each year we spend about $4,000 on this program and make forty to fifty grants.

We attempt to contribute to the improvement of the quality of teaching through occasional sponsorship of in-service training programs for teachers, an example being providing the financial sponsorship for a series of three or four Saturday meetings for teachers who work with the retarded at a particular level.

We try to help schools get money for special projects that we think are particularly worthy of support. An example of this is a grant of approximately $15,000 which we were able to help the public schools in the city of Wilmington procure to conduct an extensive project which is producing separate curriculum guidebooks for teachers of both educable and trainable retarded children. This money, incidentally, came from the Delaware Foundation for Retarded Children, an independent group which operates the all-star football game to benefit the retarded in our state. ----

We have done a considerable amount of recruiting volunteer help for the schools for the retarded in our state and have been on occasion successful in helping a school district find a teacher for a specific position. We attempt to give support to good legislation which will benefit the public school program for the retarded. We also encourage the schools to experiment with new projects for the retarded. An example of the latter is a work-study program begun for the mildly retarded in the Wilmington Schools several years ago. We participated in the initial planning of this program and, although our financial help was not finally needed, we were ready to provide the money for a special coordinator to get this project going. ----

We feel that we have a role to play in helping parents accept special class placement of their retarded child and have tried to support the public schools in this regard. Probably we are most called on for help in this area when it is deemed that a child cannot benefit from attending special class in public schools and he needs to be referred to our state operated day care centers for the severely retarded, our state institution, or some other facility. ----

DARC as a Developer of Complementary Services for the School-Age Retarded

I believe there is much that an association for retarded children can and should do to provide complementary services for the mentally retarded whose basic educational problem is being taken care of by the public schools. As an example, the Delaware Association for Retarded Children operates during the month of July day camps for the mentally retarded at various points throughout our state. We also operate in conjunction with our local YMCA a short residential camp for the retarded. We have worked for and assisted in the establishment of scout troops for the mentally retarded, an example being a girl scout troop in a school for trainable children. This troop was originally established and sponsored by DARC working in conjunction with the principal of the school.

Recognizing the recreational needs of the teenage and older retardate, we have worked with such groups as the YWCA, the YMCA, the Fraternal Order of Firemen, and other organizations to get evening and weekend recreation activities started.

We have worked with the churches of various denominations to establish religious education programs for those whose retardation is sufficiently severe to require special religious instruction classes in a church setting.

We have also worked with the State Office of Vocational Rehabilitation and other agencies in the development of vocational rehabilitation facilities which will serve the retarded as the public schools finish their work. Perhaps most notable in this area has been our work to establish two workshops for the severely handicapped including the mentally retarded. ----

DARC as a Friendly Watchdog

We have long recognized that our role so far as the public schools are concerned does not consist exclusively of being a helpmate. We feel it is proper and in the long-range interest of everyone that we raise our voices and object when things are not as they should be. We have in the past been instrumental in getting interested parents together and helping them approach their local school board in regard to the establishment of appropriate special classes. We have raised our voices in objection when we felt that the quality of a particular program left something to be desired. We have no hesitancy about suggesting to a school district with, say, one or two special classes that it ought to expand its program to include facilities for the mentally retarded at all age levels. We have pointed out what we felt sure were inadequacies and undue restrictions in regulations concerning the operating of classes for the retarded. We have inquired into the reasons when a special class has been closed.

We feel we can be most valuable when we are included in your thinking and planning. For example, if you are planning on asking for funds from the state legislature for a building program for classrooms for the retarded, you cannot expect us to immediately jump on the bandwagon if you have not been educating us to the needs as you see them and of your plans for meeting those needs. We feel that we, as the consumers of your product, can often be helpful to you in planning that product so that it most effectively meets the need. In short, our confidence in what you are doing is greatly enhanced if you have made us a part of the planning.

In summary I believe I can assure you that an association for retarded children can be your good friend and a willing and effective co-worker. Its aims for mentally retarded people are essentially the same as yours. I would suggest that you use us to the fullest.

William T. Wiest, Executive Director,
Delaware Association for Retarded
Children, Wilmington

PREPARATION OF TEACHERS FOR EXCEPTIONAL CHILDREN: IN-SERVICE ASPECTS

Marion E. Wiles

Professional people in all fields need continuing stimulation and guidance. Teachers are no different. Teachers of exceptional children usually enter classrooms with special preparation and, may I add, dedication. These assets only reinforce the preparation upon which we must build. Let us then, for a period of time, focus attention on opportunities which teachers may have for in-service growth.

In developing this subject, I shall emphasize three features of a teacher education program. Two of these you may not have considered previously as part of the in-service aspects of teacher preparation. The features are: (a) the orientation of new teachers; (b) the clarification of the administrative-supervisory organization of the institution (whether it be a school system or a state school) with respect to special education; and (c) the continuing program of teacher education, whether intrinsically or extrinsically motivated.

Adequate orientation to a new situation is one of the best guarantees of good adjustment and teaching success. Marked from the outset as a trained specialist and filling a unique position, a special teacher can find his role lonely at best. This is true whether a person is assigned to work with the gifted or the handicapped, whether in a public school with pupils of all ability levels or in a "segregated" school or institution.

What orientation experiences should a special teacher have in addition to those important for all new teachers? Let us consider the program for each of two specialists.

Mrs. Davis is trained as an itinerant teacher of totally blind elementary school children. She comes to a school district through a public county agency. She has little specific information about the school system. She knows neither the location of schools nor the nature of the school program and staff. The sending agency has the right to expect that the local authorities will facilitate the adjustment. What preparation should she be given?

A director of special services might give the newcomer an overview of the school system, pointing out such things as types of schools, their location, how they are staffed, and the sizes of classes. It is most important that Mrs. Davis know also the philosophy of the school with respect to the education of blind children; for example, the degree to which plans have been made for a blind child to be educated with sighted children. The director might arrange to accompany Mrs. Davis to the Greenbrier School where Stephen, the blind child, is in the third grade. He will introduce the itinerant teacher who, in turn, will continue the orientation. At the school the itinerant teacher should become familiar with the location of rooms, with materials and equipment available to her, and of course, with the teacher of the blind child and Stephen himself. She should meet especially those staff members who can give her supporting assistance -- the school nurse and psychologist, for example.

One might go on extending the orientation of Mrs. Davis. Let us, however, consider Mr. Munley who has been appointed to teach a class of brain-injured children at the junior high school level. Are there special orientation needs for this gentleman? Yes, especially since this is the first year that such a special group has been housed in the Berkeley Junior High School. In this situation the orientation program actually starts not with Mr. Munley but with his future associates. Preparation for the new teacher is as important as preparation of the new teacher. This is especially true in any public school system where a special group is in a building with all other pupils and where a special class pupil is graded and assigned to a homeroom along with others. An administrator or supervisor should always help all teachers appreciate whatever special programs are to be carried on in the building, whether they are programs for the emotionally disturbed, for the brain damaged, for the mentally retarded, for the deaf, or for the gifted. Only in this way will staff be knowledgeable and possess that degree of empathy desirable for the full cooperation of all teachers in planning broad opportunities for either handicapped or gifted.

When Mr. Munley, the new specialist at Berkeley School, arrives, the principal will have paved the way for many staff contacts. Plans will also have been completed for a tea where Mr. Munley will meet the parents of his pupils. The principal will also inform Mr. Munley about the school's policy with respect to ordering special supplies and equipment. Although the classroom selected is one of the finest in the building, the textbooks and other materials purchased for the junior high school are only partially appropriate for work with brain-injured pupils.

A strong orientation program, therefore, is a sound beginning of a continuing program of in-service education.

A second, often overlooked, activity (closely related to orientation in the in-service preparation of a teacher) is that of clarifying the administrative-supervisory organization with respect to special education. Although the total organizational pattern may not seem too significant to a newcomer, certain relationships which will affect him personally are of vital concern. For example, Mr. Gorman was appointed to teach mentally retarded boys at the West View Senior High School. He soon learned that at least 15 members of the administrative-supervisory staff had been delegated responsibilities for certain aspects of special class functioning -- administration, child guidance, curriculum, etc. These staff members included the principal, the assistant principal, six counselors (each of whom had as counselees two or three or the fifteen special class pupils), two psychologists, a curriculum coordinator, a director of special services, an assistant superintendent for instruction, an out-of-the-district consultant and, of course, the superintent of schools. Mr. Gorman, wanting to establish the right attitude with each of these earnest public servants started running first to one and then to another for ideas, materials or other help. Finally, after a staff conference, it was suggested that Mr. Gorman look for direct assistance to two people only -- the curriculum coordinator and a psychologist. Through this action, constructive progress was made in preparing the teacher for calm administration of his program.

Such an illustration may seem far fetched. Observation over the years, however, leads me to conclude that this problem is very common. The uncertainty of staff members concerning their immediate supervisors was brought out very clearly when a school system developed procedures to implement a state law with respect to grievance procedures. Only after many discussions, punctuated by further research, was a committee able to set forth clearly for the whole staff the relationships to be recognized in smooth operation.

In all fairness it should be pointed out that the difficulty is not one-sided. Often administrative-supervisory personnel are unclear as to their roles in special education. They wonder who is expected to do what. Certain individuals over-extend themselves when it comes to giving help which has already been given by another, while others practice a hands-off policy. In short, what becomes everyone's business turns out to be nobody's business. The situation in one school district has been helped by a consultant in special education who discusses new services with principals each year.

The second important link in the preparation chain, therefore, is the effort made to clarify the administrative-supervisory roles of individuals with respect to each teaching situation. Only then will a new teacher know where to go for help in solving children's adjustment problems, in guiding their academic growth, and in improving the setting for school living.

In developing the third aspect of in-service preparation, the continuing program of teacher education, let us generalize from a number of specific illustrations.

1. Teachers of classes of exceptional children in each of seven neighboring school systems had limited contact with professionals in similar positions. Through joint action, including the hiring of a consultant, the superintendents of the districts paved the way for the special teachers to meet monthly. At these gatherings they share experiences, work on curriculum guides, and plan joint experimentation and research.
2. The holding of frequent case conferences is a regular feature of in-service education in one community. At each conference, the problems of some child are reviewed by such staff members as the classroom teacher, the principal, the psychologist, the psychiatrist, the supervisor of attendance, the school nurse, and the director of education.
3. The classroom teachers and itinerant teachers working with two blind children in one school sparked the holding of a county conference for those concerned with the education of blind pupils. The success of the first conference led to a second. Speakers and consultants from the state education department as well as from other public and private agencies gave the impetus for further program development and improvement.
4. Through grants, scholarships and fellowships, encouragement is given teachers to avail themselves of formal courses, institutes, and workshops in the education of exceptional children.
5. Such courses and other educational programs offer opportunities also for teachers to grow "by doing." Certain classroom teachers may be selected as leaders or instructors for some of the college courses or workshops. Others may teach in the relatively new science and arts camps for the gifted, participate in a summer camp program for crippled children, or work in a remedial reading or speech clinic.
6. In one community special teachers working with a consultant spend one day each year visiting a state institution for the handicapped, a sheltered workshop, a nationally known industrial plant employing the physically handicapped, a school for children with cerebral palsy, or a similar center.
7. Opportunity for a teacher to have a visiting day (or days) each year is offered in most teaching situations. Simple as this program is, it pays great dividends and is too often overlooked.
8. The conference attendance policy of many school systems or institutions makes it possible (at least on a rotation basis) for staff members to attend state, regional and/or national conventions.
9. In one teaching situation the question of the use of teaching machines and programmed material to aid slow learners arose. A group of teachers and directors of special education traveled to a well-known foundation to get needed first-hand information concerning newly developed materials and equipment. Later, the same group experimented with the use of the programmed materials. Participation in experimentation, research, and curriculum development stimulates in-service growth.
10. Appreciating the value of field trips and first-hand information, one superintendent released a teacher for a month to tour centers of special education in some five states.

These several illustrations indicate that the continued program of teacher education does not follow a single road, but branches in many directions. Each experience, however, makes its contribution to the further preparation of the teacher to the end that he may more effectively guide the learning of pupils.

Marion E. Wiles, Executive Assistant to the
Superintendent of Schools, Great Neck Public
Schools, New York

CURRICULUM GOALS: THE STRUCTURE OF KNOWLEDGE AND THE EDUCATION OF CHILDREN WHO ARE HOMEBOUND AND HOSPITALIZED

Gloria F. Wolinsky

The teacher of the homebound and the hospitalized child knows that many things are happening in terms of curriculum and methods and materials; but because of the nature of his instructional role and the basic isolation of his situation, he may miss the stimulation of the exchange or attempt new approaches without realizing they are predicated on premises that may not be quite realistic for the youngsters he meets.

It would be well to consider the following well worn but still true statements on curriculum development. Curriculum design is usually based on (a) the individual as a dynamic learner; (b) the society in which he lives; and (c) organized knowledge. During the last 50 years American education, and special education in particular, has emphasized the individual as a dynamic learner in the society in which he lives, not to the neglect of knowledge as some would have us believe but rather in terms of emphasis as to how organized knowledge is to be taught (Hofstadter, 1962). Admittedly, this has been primarily oriented, particularly in special education, to the needs of the individual child.

Organized knowledge as a referent for curriculum design, however, has a philosophy, a structure, and a discipline that exist beyond the immediate needs of the child. The particular problems of the child may necessitate a bypass of a specific curriculum idea or method. I am thinking particularly of the problem of intuitive thought, as exemplified in mathematics and science, and the difficulties it may present for some of our children who have difficulties with abstractions and the nonrepresented or, for that matter, represented relationships. On the other hand, curriculum areas may be presented, each in terms of its structure, approach and goal, that may transcend the immediate limitations of the child and open many areas of creative thought for the youngster. What could the meaning of the literary concepts of "fate" and "tragedy" as depicted in great literature mean as a liberating force for a child who must face the inevitability of disability that will be with him throughout life?

The question at hand is not whether to organize curriculum around the structure of academic areas at the expense of the child's needs but, rather, how can the thinking of recognized experts be translated into meaningful experiences for the children with whom we are all so intimately involved. These are children who may, from very early life, have had experiences that have been only too liberally sprinkled with medication, intrusive devices, operations, separations from parents, rigorous therapeutic regimen, prescriptions and a discipline imposed by the diagnostic entity from which there is little physical escape. These may be children who have missed school and the society of children at critical periods of their lives. These are children also who, because of accident or illness, are abruptly taken from the normative world of the day school to be with us for a short time and then returned to the school world they previously knew after the emergency has passed.

What then, does the structure of knowledge mean or imply for the youngsters we know? Bruner (1961) has stated the following points as indicating the positive aspects of teaching the structure of a subject rather than the mere mastery of facts or techniques: (a) understanding fundamentals makes a subject more comprehensible, (b) human memory responds best to a structured pattern, and (c) understanding of relationships which are fundamental to structure permits a more adequate transfer.

On the other hand, Schwab (1962) has indicated that different discipline areas have different conceputal areas. For example, the teaching of science through its structure serves a purpose that is basic to the philosophy of science -- the everlasting search for knowledge that expands upon itself (Mayor, 1962). However, we know that all experts in their own areas do not agree on the philosophical foundations of their particular subjects and, therefore, the "structure" (Fehr et al, 1962; Rees, 1962; Simpson, 1963). English was not even considered in the light of structure until 1958 (Parker, 1962).

If there be differences in structure and yet there are basic advantages to teaching in this manner, perhaps the coordinating factor is the disciplined approach to any curriculum area. The knowledge that facts, skills, and techniques which are to be learned have relationships and meanings, in terms of the academics of the subject and the learner himself, will serve as a basis of broadening and deepening insights and as a technique that has meaning for many areas of academic growth.

Those of us who work with atypical children in atypical school situations are faced with the dual problem of meaning in terms of the curriculum goals, as defined for all American children, and implementation in relationship to children who are exceptional because of medical, intellectual, and institutional definitions.

References

Bruner, J. S. The process of education. Cambridge, Massachusetts: Harvard University Press, 1961.

Fehr, H. F., MacLane, S., and Spitzer, H. F. Opinions differ on teaching modern mathematics. NEA Journal, 1962, 51:2: 44-46.

Hofstadter, R. The child and the world. Daedalus, 1962, 91:3: 501-526.

Mayor, J. R. Curriculum change in the 60's: philosophical and psychological issues. Paper prepared for delivery at the Teacher Education Conference of the City University of New York, Hunter College, November 2, 1962.

Parker, W. R. The concept of structure in english. The Educational Record, 1962, 43:3:210-216.

Rees, Mina. The nature of mathematics. Science, 1962, 138:3536:9-12.

Schwab, J. The concept of the structure of a discipline. The Educational Record, 1962, 43:3:197-206.

Simpson, G. G. Biology and the nature of science. Science, 1963, 139:3550:81-87.

Gloria F. Wolinsky, Assistant Professor,
Hunter College of the City University of
New York, New York City

THE TRAINABLE MENTALLY RETARDED: GOALS AND RESPONSIBILITIES FOR INSTITUTIONAL PROGRAMS

William J. Younie

Like other programs and facilities in the field of special education, institutions for the mentally retarded are experiencing fundamental changes in planning and implementing their programs of education and training. Some changes, such as the community placement of the educable retarded, are well underway. Other program adjustments, such as activity groups for the profoundly retarded, have been very slow in developing. Because of the noticeable procrastination and unevenness which have characterized institutional programs, many persons hold an unfavorable opinion of them. Although some programs still merit an inferior rating, the level of educational services is improving.

Particularly rapid progress has been made in providing classroom and work training programs for trainables in the teens and beyond. Much of this growth can be traced to three factors: (a) a basic change in institutional populations, (b) the passage of legislation mandating the education of the retarded in the public schools, and (c) the growth of community services.

Traditionally, the educable retarded have made a significant contribution to the operation of institutions. As dictated by present philosophy, however, the educable retarded are encouraged to remain in the community or be returned quickly to it. Consequently, the institutional population of trainable and profound cases has increased dramatically while the proportion of the educable retarded has decreased or remained static. With more care required and fewer educable residents to help provide it, institutions have employed more staff and have increasingly looked to the older trainable resident as a source of help.

As the possibility of community placement has increased through the expansion of community services, the institution has gained additional incentive to train its residents for return to the community. Community agencies often provide enough additional support so that families or boarding homes may manage children whose only previous resource was the institution.

As a result of the factors just cited and various other pressures, institutional programs for trainables in the teens and beyond have been started, expanded, or revised. The philosophy guiding these programs assumes a commitment to well defined ideas and a willingness to submit to a certain discipline of direction.

A catchword of our socity is togetherness. In the institutional society under consideration we might better use the word separateness -- the term being employed to signify that the trainable program should be given individual status and be identified as the sole responsibility of specified supervisory personnel. This stipulation will help insure a feeling of the program's value and will allow for concentrated attention to curriculum development as well as provide for the specific distribution of funds and effort. Too often, the trainable program is an added supervisory duty that has no clear definition or authority and is performed as time permits.

As part of its definition, separateness must imply equality with other programs. In the somewhat confining institutional atmosphere, staff members easily feel second-rate and function accordingly if they are assigned to programs that are not considered important enough to have individual direction. Separateness should include the concept that each teacher has singular responsibility for trainables. It is difficult to defend the practice of having teachers work with trainable and educable children for half a day each. Lesson planning must of necessity suffer as must the teacher's basic interest and prime commitment. The trainable child is different enough in need, important enough in person, and usually numerous enough in number to be given a program that is separate, equal, and unique, yet closely coordinated with other education and training programs that have central direction and supervision.

Work experience programs for trainable residents are an essential service. The usual practice followed is to provide half a day of work, half a day in the school situation. However, the general work orientation of educable programs should be replaced by a system of intensive specific training in job situations common to the institution; the object to produce a well trained adult who can readily function in the many natural opportunities provided by the institution's work needs. Unlike the community, the institution can guarantee job placement in an area of the resident's choice or demonstrated ability. In addition to its practicality, specific job training becomes essential when we consider that staff members in institutional work areas have little time to devote to the intensive job training required by the trainable worker. Also, after a resident is placed in a job from the specific work training program, he is much more comfortable as he can continue routines established in school. The specific training program should be developed around study units describing three or four prime work areas and should include a recording process which will be used in determining full time placement.

Another feature of the program should be "programming by performance." The older trainable resident functions in a way that is difficult to evaluate. Academically there is little to measure. Experience gaps or recording inaccuracies make it difficult to predict potential; and poor speech or absence of it often make it impossible for the resident to indicate what he knows how to do. Because ability assessment is difficult we tend to place only those residents who show positive signs of past or potential work success.

The concept of programming by performance means simply that residents are carefully placed in work situations where performance can be controlled and observed. By adjusting the work level upward or downward and by providing specific help with work skills, programming by performance will often reveal a worker of some ability who otherwise may have been missed. To implement this concept, a number of different work or activity situations must be available so that we may avoid the problem of adjusting the child to the program rather than suiting it to his needs.

A final concept to be covered is that of "integrated minuteness" -- the division of specific jobs into several routines each of which is performed by one person. The concept implies something more than having two, three, four, or more residents do one worker's job. It assumes considerable sensitivity to individual needs on the part of the counselor or supervisor, requires a very comprehensive knowledge of each job and of each regular employee assigned to it, and requires that the work staff be unusually flexible and understanding. The concept is best applied in situations that do not demand steady production and in areas where pressures for extreme work conformity are reduced or absent. When soundly applied, the concept of integrated minuteness allows the utilization of trainable residents of very low ability.

The application of practical concepts such as those described is essential to moving the trainable program forward. Equally important is the concern shown for the people who are in direct contact with the residents. As the ability levels of resident helpers change so too must there be a change in the expectation level of non-professional institutional personnel. Unlike his more capable educable counterpart the trainable worker cannot be directed verbally to any great extent. He learns best by working along with an employee who systematically shows him what to do. The appearance and apparent inefficiency of some trainable residents are not always given initial acceptance by personnel. Careful orientation will help to dispel fear of the trainable worker and aid in developing in the staff realistic standards that are not based on the use of pressure either direct or insidious. Personnel should be helped also to learn to recognize the residents' readiness to grow in a work situation and not hold him back by overprotecting or restricting him from trying to perform additional duties.

To give a concrete illustration of how the concepts just stated may be applied, I'll refer to the programs conducted for the trainable residents at the Southbury Training School. These programs are the trainable program and institution services program. The trainable program includes school classes, activity classes, cottage activity classes, and the homebound program. The institution services program is responsible for trainable work placements, sheltered work groups, and certain institutional industries. Both programs are part of the Education and Training Department but each has a full time supervisor.

The initial placement of the trainable child illustrates the concept of programming by performance. In this phase young trainable children are grouped together so that growth patterns may be observed carefully. As definite maturation paces are recorded, the children are separated into ability tracks which provide similar activities at varying levels of difficulty. Placement flexibility insures that initial conclusions do not become permanent ones. At about age 14 the A track students are introduced to the program of specific work experience and are given a series of activities related to selected institutional work areas. Students developing more slowly remain in the developmental program and receive additional experiences which lead to future activity or possibly to the institution services program.

The activity program is a logical extension of the developmental program and consists of simple craft and other pastime activities which occupy the residents' day and develop skills that may eventually be useful in a work situation. At approximately age 17 the resident who has completed the work training program moves into the institution services and industries program. This program functions as an extension of the trainable program although it is administratively separate. The institution services program carries out the concepts of integrated minuteness and programming by performance.

The productive worker, the smallest segment of the trainable group, functions independently and may have potential for community placement. The semi-productive worker requires considerable supervision but does very well at selective repetitive tasks.

The therapeutic assignment gives work status to the resident without expecting any real production of him. The work supervisor is actually more involved than the resident and serves to maintain rather than to train. There is always the possibility of transfer from therapeutic assignments to activity assignments.

In any level of the trainable program there are some residents who temporarily or permanently are not compatible to regular programs. These residents are served by the cottage activity programs which provide planned diversions. The homebound phase of the cottage activity program serves capable residents who are unable to attend school classes due to age or crippling.

While used to illustrate the various concepts presented, the Southbury program is not considered to be a total or transferrable answer to the problem of programming for the trainables in the teens and beyond. Some aspects of the program, notably the specific work training phase, are experimental. Other aspects, particularly the cottage activity and homebound programs, are not fully implemented due to staff shortages. However, it is hoped that the concepts on which the program is based can lead to expansion of the program at Southbury and emulation of it elsewhere.

William J. Younie, Director of Education
and Training, Southbury Training School,
Connecticut

PROGRAM PLANNING COMMITTEE

Program Chairman....................................Frances P. Connor

Program Planning Committee:

Edythe Blackburn
Leonard Blackman
Dura-Louise Cockrell
Julius Cohen
Aurelia Davis
Joseph Fenton
Herman Goldberg
Jean Hebeler
Mary Krider
Kenneth Mangan
John McInnes
James McLean
Herbert C. Quay
Melvyn Robbins
Katie Sibert
Al Tudyman
Bluma Weiner